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# ON THE EXISTENTIAL SIGNIFICANCE OF 'READINESS POTENTIALS'

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*abstract*

*Could there be a balanced philosophical stance capable of accommodating the scientific facts pertaining to free will without compromising the ideal of human freedom and autonomy? A stance that can render intelligible the inferences emerging from the factual analysis of free will in terms of the phenomenon called 'Readiness Potential' (RP), at the same time, existentially upholding the ideal of freedom? In the present paper, an attempt will be made to bring to light such an existential phenomenological perspective implicit in the philosophy of the French phenomenologist Maurice Merleau-Ponty. In the analysis, some of the most relevant scientific facts pertaining to RPs and the corresponding scientific inferences as to the conception of 'free will' will be taken into account with a view to see how in this phenomenological scheme they could all be intelligibly accommodated. Once this is achieved, a unique version of compatibilism inherent in Merleau-Ponty's thought will also be traced*

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*keywords*

*free will, readiness potential, lived body, consciousness, temporality*

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**I. Introduction** Philosophically, the concept of 'free will' derives its significance from the more comprehensive theme of human freedom and autonomy. Therefore, any scientific discovery relevant to the concept may have its due influence on the corresponding philosophical debate, but without any overshadowing effect on its origins. However, the general philosophical tone of the debate on freedom during the last few decades has been excessively influenced by the unprecedented progress of neuro-scientific investigations into free will, registered over the same period. This becomes evident in the role that the neuro-phenomenon of 'Readiness Potentials' (RP) has assumed lately in the philosophical discussions of human freedom and autonomy. This trend, characteristic of 'scientism' of our age, has had such an impact on the philosophical enquiry into the ideal of freedom, that the latter has often been virtually reduced to a factual analysis of 'free will' in terms of RPs. Thus, in the fact versus value analysis of the notion of freedom, the factual aspect seems to have been dominating for a while now. Consequently, paradigm-neutrality that is supposed to be the hallmark of philosophical approach seems to be lacking here.

In fact, this is inevitable a situation in view of the transformation that our social life and intellectual outlook have undergone in response to the scientific and technological advancements of the last few decades. Also, it has to be admitted that unless and until scrutinized by science, even so foundational a value such as freedom or autonomy maybe considered untenable in the times that we live in. That being so, we cannot detach totally the neuro-scientific facts pertaining to 'free will' from an analysis of the theme of freedom and autonomy anymore. However, on this line of thought, if we make room for the scientific findings in the analysis and synthesize them with the theme of human freedom, a libertarian may still argue that it is possible for human agents to act freely independent of any necessitating causes.

It is in this context that an enquiry into a balanced philosophical stance, which accommodates the scientific facts (irrespective of their implications) without compromising the ideal of human freedom and autonomy, becomes pertinent. A stance that can intelligibly accommodate the inferences emerging from the factual analysis of 'free will' in terms of RPs, at the same time, existentially upholding the ideal of freedom. In the present paper, we will bring to light such an existential phenomenological perspective implicit in the philosophy of the French phenomenologist Maurice Merleau-Ponty, wherein facts and values are harmonized existentially.

In our analysis, we will take into account, on a representative basis, some of the most relevant

scientific facts pertaining to RPs and the corresponding scientific inferences and see how in the said phenomenological scheme they could all be harmonised with the ideal of human freedom. The criterion of relevancy in our choice of the scientific analyses is the stress on the nexus between consciousness and temporality- which, as we will see shortly, is crucial in the philosophical stance at hand.

What is meant by 'free will' for our purposes is the first thing to be clarified.

As we have already indicated, we will be treating it as a derivative of the more comprehensive theme of human freedom and autonomy. And when it comes to freedom and autonomy, we in fact have a whole conceptual spectrum available as to what they mean. At one extreme of this spectrum, we have the broadest folk-psychological ideas of human capacities such as that allowing one to control his/her action and behaviour, change one's habits and routine, overcome addictions and predilections etc. and the graver course of deciding or changing the way of one's life as a whole by consciously considering and exercising one's willpower in doing so. On the other end of the spectrum, we have the narrowest version of expressing freedom and autonomy, which consists in responding to and consciously carrying out specific experimental instructions in the capacity of subjects volunteering in a neuro-scientific experiment<sup>1</sup>. In between these two extremities<sup>2</sup> are placed the other views of religious, socio-legal<sup>3</sup> and psychological origin.

A practical definition of free will which would resonate with the whole spectrum mentioned, without any bias, may be that:

free will is a feature of cognitive/motivational systems with sufficient complexity to compute the likely effects of alternative (sequences of) hypothetical actions, and to compare them with respect to moral and personal preferences of many kinds before deciding what to do (Boden, 2011, p. 163).

But the interesting fact is that when it comes to conceptualising the idea, such an unbiased approach is often not materialized. The findings made in such experimental settings as that forming the latter extreme of the spectrum mentioned usually have a sweeping impact on the whole spectrum, irrespective of the conceptual limits and practical limitations of such findings. And consequently, we often have a narrowed-down conception of free will based on and catering to such findings alone, without any regard to the existential situation of mankind reflected in the remaining stretch of the spectrum.

The above mentioned fact has been substantiated in the works of a number of researchers. Alfred Mele, in particular, has had a long pursuit in bringing this fact to light. In a recent article (Brass *et al.*, 2019) he has consolidated his arguments for his stance, in continuation of what he has argued in his *Effective Intentions*. Agreeing with Mele on his conception of 'overt actions' as actions 'that essentially involve peripheral bodily motion', our approach in the present paper as well, will resonate his point as to the insufficiency of scientific experiments

## 2. Scope of the Concept of Free Will

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1 These come under what Alfred Mele calls 'overt actions'. This notion will be examined shortly.

2 For an interesting account on how these extremities may actually be forming part of a spectrum, see (Smith, 2011).

3 It is well acknowledged that there is an ongoing debate about how, and to what extent, empirical findings pertaining to free will may affect the long established judicial procedure and our long standing outlook on culpability. See for example: (Hodgson, 2009; Morse, 2003; Nestor, 2019).

We do not intend to enter that debate here. However as will be seen towards the conclusion, we will be supporting in a unique way the camp upholding free will.

in demonstrating such actions as lacking free will. While his arguments are formulated around the idea of the difference between 'proximal' and 'distal' intentions, in our endeavour, we will be developing our own arguments for a similar view deriving them rather from the phenomenological scheme that we have adopted.<sup>4</sup>

Another point that Mele makes in the article in defence of his position is the role that moral and practical involvement of the agent may be playing in rendering an overt act free. This, in turn, depends on the view one takes of the idea of free will. Adhering to the definition of free will that we have adopted above, we too will be accounting for such role. However, our treatment of subject won't be merely as a 'cognitive agent' but rather as an embodied agent.<sup>5</sup> Apart from the mentioned overshadowing effect of scientific findings, an important factor contributing to the prevalence of the aforesaid scenario is the view upheld by the majority of scientific community that free will is not compatible with determinism. In the philosophical literature pertaining to compatibilism, however, there are formidable arguments against this view<sup>6</sup>, formulated taking into account the other aspects in the spectrum mentioned that reflect the existential plight of mankind.

It has to be noted here that the scientific findings pertaining to RPs so far do not prove determinism. Therefore, a strict compartmentalisation in terms of compatibilism and non-compatibilism is not yet theoretically possible. So when we use the term 'compatibilism' in the present context, what we mean is a tentative position which upholds free will in tune with the latter set of arguments mentioned.

It is in these circumstances that it becomes utmost important to set an appropriate conceptual framework within which the idea of 'free will' can be invoked and debated meaningfully. This has to be done reflecting on the existential situation of man, as well as taking into account the said delimiting role of scientific discoveries, thereby reckoning the implications of both compatibilism (in the above sense) and determinism.

A certain conceptual framework proposed by Eddy Nahmias seems to meet this requirement and therefore could serve as an ideal starting hypothesis for our purposes. He proposes the following framework as a sensible one within which recent evidence from psychology and neuroscience may challenge free will avoiding subscription to extreme views:

(R1) Free will requires that one's actions properly derive from decisions or intentions that one has at some point consciously considered, or at least that one would accept, as one's reasons for acting.

(R2) Science is showing that our actions do not properly derive from decisions or intentions that we have consciously considered or would accept as our reasons for acting. Rather, our actions are produced by other factors, and we rationalise them after the fact.

(R3) So science is showing that we do not have free will (Nahmias, 2010, p. 353).

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4 This will be done based on the distinction that is drawn between 'perceptual' and 'intellectual' consciousness in that scheme, and the interpretation of RPs in such a scenario. Therein, overt actions will become part of the perceptual and motor capacities of the 'lived body'- wherein no conscious preference or action control is involved. Whereas controlling behaviour that is the hallmark of free will and subjectivity will be founded in intellectual consciousness - which in the scheme coincides with temporality. Drawing on some of the most relevant empirical findings as to the deep seated connection between the neuro-phenomenology of RPs and the invocation of time consciousness, we will substantiate our phenomenological proposition, 'time is subject'.

5 In a unique Merleau-Pontyan version of compatibilism that we will be developing towards the end of the paper, we will have our defence of this stance in terms of the phenomenological notion of embodied intersubjectivity.

6 See, M. McKenna, Compatibilism In E. Zalta (ed.), The Stanford Encyclopedia of Philosophy URL: <http://plato.stanford.edu/entries/compatibilism>.

Adopting this conceptual framework, let us analyze the first premise forming it and see the implications of the same. Obviously, it connects the phenomenal aspect of free will i.e. action, with the non-phenomenal aspects - decisions and intentions, in a derivative mode, as either:

- i) the consequence of the subject's conscious consideration, or (at the least)
- ii) the subject's reasons for acting.

We can immediately sense that the former alternative above has set the narrower paradigm for scientific enquiry into free will and has consequently been motivating rigorous empirical research. Whereas the latter has set the broader paradigm for the enquiries into human freedom and autonomy and has consequently been inspiring rather a sociological as well as psychoanalytical approach, alongside the empirical one.<sup>7</sup> Hence it seems proper to deal with these two scenarios separately.

In what follows, focusing first on the former alternative, we will briefly survey the empirical endeavors chosen based on the criterion of relevancy set at the end of the last section. After analyzing their inferences, we will compile the tenable implications thereof and bring to light the relevance of the same to Merleau-Ponty's phenomenological scheme of human embodiment and perception. We will then elaborate this scheme and show how the same can accommodate intelligibly the empirical findings analyzed, without resorting to any deterministic stance. Once this is achieved, we will take up the latter alternative mentioned (i.e. subject's reasons for acting) and show how the same could be made an intelligible phenomenon in Merleau-Ponty's philosophical approach towards human freedom and autonomy viewed as a unique version of compatibilism.

In this task, we have as a starting point in the vast literature of relevant empirical research, path breaking neuro-scientific discoveries to be found in the work of British neuroscientist Benjamin Libet. Basically, Libet's work enquires into the relation between timing of intention and brain activity. Libet had as his source of inspiration, the discovery of what was called 'Bereitschaft-potential' or 'readiness potential' (RP), by Kornhuber and Deecke (1965). They had found that, performance of 'self-paced' voluntary acts was preceded by a slow electrical change recordable on the scalp at the vertex, and the onset of this electrical indication of certain brain activities preceded the actual movement by up to one second or more. Through a self-designed ingenious experiment, Libet went on to analyze the implications of the said finding on human free will. In the experiment, the subjects were to report a 'clock-time' (*Figure 1*) at which he/she was *first aware* of the wish or urge to act, where the act consisted in a simple flick or flexion of the wrist at any time they felt the urge or wish to do so. These voluntary acts were to be performed capriciously, free of any external limitations or restrictions (Libet *et al.*,1982).

### 3. A Survey of Relevant Neuro-Scientific Enquiries

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<sup>7</sup> This has been inevitable in the post-Freudian and post-existentialist intellectual world. After Freudian interventions, it has become virtually impossible to attribute full fledged autonomy to 'persons' or to take their 'reasons' for voluntary actions at face value without invoking a psychoanalytical approach as well alongside the main course of enquiry- whether scientific or otherwise. Similarly in the post-existentialist world, autonomy of subject, whether factual or axiological has been re-cast from the perspective of the subject's embeddedness in her socio-cultural as well as ecological environment. However, it shouldn't be thought that we have two water-tight compartments available here for exclusive treatment. As we have hinted, it's rather just a matter of priority. As we will shortly see, even in the empirical approach the psychoanalytical norms and insights may play a crucial role. (See below the discussion of the work of Schlegel *et al.*).

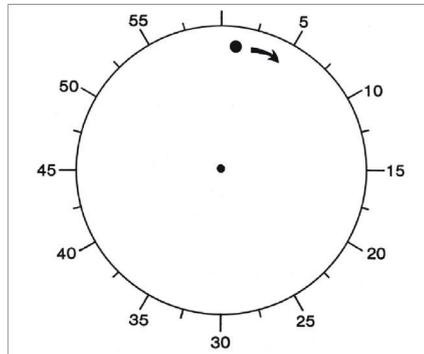


Figure 1

Oscilloscope 'clock'. Spot of light revolves around periphery of screen, once in 2.56 sec. (instead of 60 sec. for a sweep-second hand of a regular clock). Each marked off 'second' (in the total of 60 markings) represents 43 msec. of actual time here. The subject holds his gaze to the centre of the screen. For each performed quick flexion of the wrist, at any freely chosen time, the subject was asked to note the position of the clock spot when he/she first became aware of the wish or intention to act. This associated clock time is reported by the subject later, after the trial is completed. (From Libet *et al.*, 1983).

The clock set for the experiment was much faster than the usual clock, in order to accommodate time differences in the hundreds of msec (fig.2). Each RP was obtained from an averaged electrical recording in 40 trials. In each of these trials the subject performed the sudden flick of the wrist whenever he/she freely wanted to do so. After each of these trials, the subject reported W, the clock-time associated with the first awareness of the wish to move (Libet *et al.*, 1983). The results of many such groups of trials are diagrammed in fig. 2.

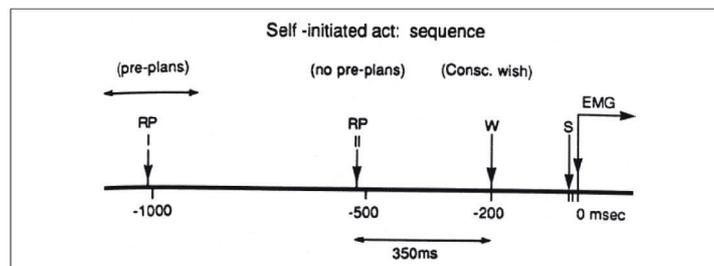


Figure 2.

Diagram of sequence of events, cerebral and subjective, that precede a fully self-initiated voluntary act. Relative to 0 time, detected in the electromyogram (EMG) of the suddenly activated muscle, the readiness potential (RP) (an indicator of related cerebral neuronal activities) begins first, at about -1050 ms. when some pre-planning is reported (RP I) or about -550 ms. with spontaneous acts lacking immediate pre planning (RP II). Subjective awareness of the wish to move (W) appears at about -200 ms., some 350 ms. after onset even of RP II; however, W does appear well before the act (EMG). Subjective timings reported for awareness of the randomly delivered S (skin) stimulus average about -50 ms. relative to actual delivery time. (From Libet, 1989.)

In Libet's own words, the outcomes of the experiment summarized thus:

For groups in which all the voluntary acts were freely spontaneous, with no reports of rough preplanning of when to act, the onset of RP averaged -550 msec. (before the muscle was activated). The W times for first awareness of wish to act averaged about 200 msec.- for all groups. This value was the same even when subjects reported having preplanned roughly when to act! If we correct W for the -50 msec. error in the subjects' reports of timings of the skin stimuli, we have an average corrected W of about -150 msec. Clearly, the brain process (RP) to prepare for this voluntary act began about 400 msec. before the appearance of the conscious will to act (W). This relationship was true for every group of 40 trials and in every one of the nine subjects studied. It should also be noted that the actual difference in times is probably greater than the 400 msec; the actual initiating process in the brain probably starts before our recorded RP, in an unknown area that then activates the supplementary motor area in the cerebral cortex. The supplementary motor area is located in the midline near the vertex and is thought to be the source of our recorded RP (1999).

The overall implication of the outcomes being that the volitional process is initiated unconsciously.

However, in sequels to the original work, Libet has continued his enquiry, coming out with significant rejoinders to the initial findings. In the latest rejoinder (Libet, 1999) that emerged out of a similar set of experiments specifically aimed at studying the vetoing power of humans as to the conscious urge or wish for action, he has observed that the existence of a veto possibility is not in doubt. In this experiment, there were no recorded RPs with a vetoed intention to act. However, while vetoing an act at a pre-arranged time, a large RP has been observed to precede the veto. This, according to Libet, signifies that the subject had indeed been preparing to act, even though the action was aborted by the subject. Therefore he comes to the conclusion:

The awareness of the decision to veto could be thought to require preceding unconscious processes, but the content of that awareness (the actual decision to veto) is a separate feature that need not have the same requirement (Libet, 1999).

And limiting his earlier inferences, infers now that the conscious function could still control the outcome and therefore freewill is not excluded. However, he observes:

These findings put constraints on views of how free will may operate; it would not initiate a voluntary act but it could control performance of the act. The findings also affect views of guilt and responsibility (ibid.).

Taking the said 'awareness' to be the hallmark of human agency, we shall see below in the discussion of our phenomenological scheme, the existential significance of the functional difference between 'the awareness of the decision' and the 'content' of such awareness that Libet draws in the above excerpt. Even before that, however, we have to see the further development and refinements of these proposals of Libet's at the hands of some other neuroscientists so that we can arrive at a reasonable set of inferences pertaining to the neuro-phenomenological significance of RPs.

Though these enquiries implicitly presume identity of brain states with consciousness<sup>8</sup> – a

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<sup>8</sup> This observation is not specifically derived from Libet, but is of generic import. It could be argued that Libet did not find any neural correlate of 'conscious will' but merely observed that specific brain states precede the time of

hallmark of almost every neuro-scientific enquiry – they are of particular interest to us because of the direct and specific nexus that they try to establish between subjective consciousness and temporality with reference to the phenomenology of RPs. As hinted above, in our phenomenological scheme, time is that phenomenon which is crucially connected with, or rather identical with subjective consciousness. Therefore the experiments are chosen keeping the said nexus in mind.<sup>9</sup>

We will start with one of the most recent works on the significance of RPs carried out by Schlegel *et al.*, (2015) for this experiment occasions a re-visit of the conceptual framework of free will that we have opted. In their discussion of the empirical results, we can find a more concrete formulation of the two alternatives to the idea of free will that we have derived from that framework. Also, their observation clearly sets the paradigm of the whole genre of empirical research associated with Libet's work. It runs thus:

In discussions of will it is useful to distinguish distal acts of willing (e.g. willing to take part in an experiment and what it entails) from proximal acts of willing (e.g. willing to move one's finger during a particular trial of that experiment). Experiments in the tradition of Libet, including our own described here, test whether acts of proximal conscious will play a causal role on each trial where a movement is made. What we and Libet and his followers have studied is whether the proximal will to make a movement at a particular time - what Mele (1992) calls a "proximal intention" to move - plays a causal role in the sequence of events that include the RP and the subsequent motor act (Schlegel *et al.*, 2015, p. 201).

Precisely, inquiry into this 'proximal intention' and its causal role referred to have characterized the experiments in the tradition of Libet. And in the above excerpt, the experimenters have confessed to this fact. Hence our categorization of such a course of enquiry in our analysis under the head, 'free will in action as the consequence of the subject's conscious consideration' clearly stands vindicated.<sup>10</sup>

Just as we have observed, our latter category, i.e. 'free will as the subject's reasons for acting'<sup>11</sup>, having been not tested so far on similar lines, has rather attracted a sociological or psychoanalytical approach. This fact too has been highlighted by the same researchers in their concluding remarks:

Given our own and Libet's data, it is reasonable to conclude that proximal conscious willing is not a necessary cause of action in the kinds of cases our experiment tested. But it is important to acknowledge that there are other scenarios where conscious willing might cause movement, as described above. The findings here are restricted to a very special class of actions, so they should not be generalized into broad conclusions

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conscious awareness. But it has to be noted that for some phenomenon 'to precede' some other, there should already be a scaffold of temporality existing- whether conscious or not. And without implicitly presuming some kind of identity and continuity of the 'willing subject' with such a temporal scaffold, Libet couldn't have proposed the said 'precedence'. In this sense, the observation applies to Libet as well.

<sup>9</sup> It may be noted that there are many other empirical endeavors following the same line. See for example, the crucial work carried out by Schurger *et al.* available at: <https://www.pnas.org/content/109/42/e2904>  
We consider our choice of experiments to be thematically representing all such efforts.

<sup>10</sup> It may be argued that both proximal and distal intentions can be guided by 'considerations'. But the question here is whether such 'consideration' is proximally conscious or not.

<sup>11</sup> It may also be argued that the notion of distal intention does not necessarily translate into the notion of reason for acting. However it does translate into reason for 'not acting now'- which too is a manifestation of free will.

about all actions or about free will in general. Future experiments should move beyond the Libet tradition to test whether distal conscious intentions and willing play a causal role in subsequent actions (2015, p. 202).

With that observation, let us analyze what made them reasonably conclude that ‘proximal conscious willing is not a necessary cause of action’.

Briefly, the experiment consisted in making the subjects watch specifically edited and sequenced video clips over a predetermined time interval, during which they would be subjected to hypnotic induction. The hypnotic induction included a post-hypnotic suggestion instructing subjects to squeeze a stress ball in their left or right hand, according to the red arrow on the screen, once during each video clip at a time of their choosing. This way both RP and lateralized RP (LRP) were accounted for.<sup>12</sup>

The readings from the experiment showed that both an RP and LRP occurred even when subjects performed a motor act without being conscious of having commanded it, for due to the post-hypnotic suggestion, they perceived that the ball squeezes happened due to external forces, thus indicating that the RP and LRP may be unrelated to the subjective experience of intentional movement. This is how they concluded: “While the exact nature of the neural processes reflected by the RP remains unclear, we can conclude that those processes are not specific to conscious willing” (Schlegel *et al.*, 2015, p. 201).

As we noted earlier, the work of Schlegel *et al.* typifies a neuro-scientific experiment wherein psychoanalytical methods and principles are at work. We have already commented on the inevitability of adopting such an approach. However, doubts may be cast as to whether the fact that subjects did not report that the action was voluntarily executed (but was rather imposed by an external force) is really enough to infer that these were not voluntary actions? The response to this will be that, when it comes to deciding ‘voluntary nature’ of an action from a phenomenological point of view, the necessary condition is the subject’s conscious experience of such action, which is lacking here. It could be demonstrated that such conscious experience may be flawed, thereby proving that it is not a sufficient condition.<sup>13</sup> However, since our approach is set to be phenomenological, we may stick to the former view and reasonably infer from the conclusion of Schlegel *et al.* the following hypothesis:

H1: The experiments in the tradition of Libet may not be sufficient to establish the nexus of the neuro-phenomenology of RPs with the conscious phenomenology of free will.

It may be recalled here that in his original experiment, Libet was not trying to explain the phenomenology of free will, but rather to establish a possible temporal connection between such experience and the onset of the neuro-phenomenon RP. It is exactly the same aspect that we are problematising here, and not the ‘why’ question as to such experience.

Now we shall take up for discussion two more empirical results shedding light on the same stance. Unlike the experiment just discussed, they do not involve any psychological technique like hypnotic induction in drawing the conclusions, but remain strictly analytical in their approach.

In the first experiment, Libet’s experimental setup was altered in such a way that the subjects

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<sup>12</sup> While the RP is symmetric and represents the early part of the motor activity preceding movements, the LRP represents a later phase and is lateralised to the hemisphere contra-lateral to the side of movement.

<sup>13</sup> See for example, (Wegner & Thalia, 1999).

had to press a button with one of their hands, the choice of which depended on a visual cue (C.S. Herrmann et al., 2008). They found that the RP set in before the stimulus was presented—thereby indicating that the RP was compatible with different outcomes. Also the participants reacted appropriately to the cue.

Hence their conclusion is that, RP cannot be decisive as to which of the two alternative courses of action available (right-hand vs. left-hand movement in this case) are executed in any such experimental setup. Rather, it seems to reflect a general expectation or an unspecific motor preparation for action (of both hands in this case). Technically, this result provides evidence against what they call the stronger hypothesis of Libet, viz. “the brain decides to initiate or, at least, to prepare to initiate the act before there is any reportable subjective awareness that such a decision has taken place” (Libet, 1985).

However, as we can readily see, it does not rebut what is called the weaker hypothesis viz. ‘the initiation of the free voluntary act appears to begin in the brain unconsciously, well before the person consciously knows he wants to act!’ (Libet, 1999). It may be noted that in order to defend our hypothesis H1, evidence against the stronger as well as the weaker hypothesis of Libet is needed. Therefore, let us discuss now, another recent empirical result which seems to provide such evidence. And in fact this result is more significant to the paradigm of free will that we have set so far.

The results of experiments conducted by Susan Pockett and Suzanne Purdy (2010) of University of Auckland, confirm the stance that we have just seen above as to the status of Type II RP (i.e. LRP) with regard to free will argument. They too rebut the ‘strong hypothesis’ of Libet by way of a similar experimental strategy. But their analysis of the Type I RP has been ingenious and just as we have observed, that has put the legitimacy of even the ‘weak hypothesis’ at stake.

The difference in their approach was both conceptual and psychological. They asked the question whether an urge is different from a decision, and based on that point, set their experimental procedure. Libet’s experiment was repeated but the experimenters compared the subjective time reports elicited by Libet’s original instructions which emphasized spontaneity, with those elicited by a new set of instructions. The new set of instructions was designed to eliminate spontaneity and focus all of the subjects’ attention in the pre-movement period on a definite decision about which of two fingers to move. This required the subject to add two numbers, a different pair for each trial, which appeared in the centre of the Libet clock. “If the sum was odd they were to press one key. If the sum was even they were to press an adjacent key. After each trial they were asked to report the instant of their decision about which key to press” (Pockett & Purdy, 2010, p. 39).

Our observation above that their approach had been conceptually and psychologically innovative becomes evident from the following excerpt:

In these experiments subjects were not given a choice of whether to report “urges”, “wantings” or “decisions”. In the trials emphasizing spontaneity, only the word “urge” was used - the words “wanting” or “decision” were not mentioned. In the decision trials the words “urge” and “wanting” were not mentioned: the subject was asked only to report the instant at which they decided which key to press. To eliminate any subconscious bias either on the part of the subject or on the part of the experimenter, only completely naïve subjects who had never even heard of Libet’s experiments were studied, and no training sessions (where the experimenter might unconsciously have reinforced a desired result) were given. As a further attempt at achieving unbiased accuracy we also inserted an accept/reject step, so that immediately after each trial the subject had the opportunity to reject that trial if they felt they had lost concentration

momentarily and had to guess their reported time (Pockett & Purdy, 2010 pp. 39-40).

Given this scenario, they tested the hypothesis:

- i. the experiments on spontaneous urges would replicate Libet's result, whereas,
- ii. in the experiments on definite decisions the reported instant of decision would be shifted back in time to the start of the RP.

Just as anticipated, both Libet's original finding and the first part of the hypothesis were confirmed. However, the second part of the hypothesis, - i.e. for decision trials the reported instant of conscious decision would be shifted back in time to the start of the RP - was not only not entirely fulfilled, it rather gave way to an overall revision of the role of RP in decision trials.

The decision trials produced either no RPs at all, or RPs that started at the same time as or after the reported decision time. Further, these latter readiness potentials were both smaller and radically shorter than the "normal" RPs recorded during spontaneous movements. The most secure conclusion from these experiments in the experimenters' own words: "...is that the ERPs (event related potentials) associated with decision-related movements are different from the ERPs associated with urge-related movements" (Pockett & Purdy, 2010 p. 40).

In the decision trials, according to them, the subject's attention in the time period immediately before the movement had been completely taken up by performing the necessary calculations. Therefore the subject had no spare capacity to spend on anticipating the arrival of a "spontaneous" urge. Given this scenario, "there were no early RP components - and often no RPs at all" (ibid.).

Accordingly, they inferred that the early part of a standard RP may be more related to expectation or readiness than to specific preparation for movement. More importantly, according to them, a second implication of the results was that, even if one disagrees with the conclusion that RPs are associated with general readiness rather than movement *per se*,

...it may not be particularly valid to base any conclusions about the conscious or unconscious nature of *decisions*, as opposed to spontaneous urges, on Libet's experimental data. Decisions are different from urges (Pockett & Purdy, 2010 p. 44).

Thus they have proposed their results to be restricting the scope of Libet's findings to spontaneous urges, and this is done on the assumption that decisions are different from urges. Gathering from the experiments discussed so far, the inferences that have been supportive of our hypothesis H1, we have the following set of points:

1. Voluntary action can be based either on 'decisions' or on 'spontaneous urges', where 'decisions' are different from 'spontaneous urges'.
2. In the case of conscious decisions, there are no early RP components activated and often no RPs at all.
3. It is in the case of 'spontaneous urges' that Libet's postulations based on RP have any legitimate applicability, if at all.
4. Even in that case, neuroscientists are not yet certain about what all brain areas are active and what all specific processes are involved in the preparatory period prior to a spontaneous voluntary movement.
5. Notwithstanding this, there has been consistent empirical evidence that those processes need not be specific to conscious willing and action, so that RPs are likely to

be neither necessary nor sufficient for voluntary action.

The first three points above are a direct consequence of the last experiment analyzed, wherein the conceptual difference drawn between 'decisions' and 'spontaneous urges' has been demonstrated empirically. And we have seen on a representative scale, certain experiments in Libet's tradition that have paved way to the said conceptual innovation. Also, it was from them that we formulated our hypothesis H1. Now, based on our existential experience as practical human agents if we subscribe to the conceptual difference mentioned, we can readily see the first three points to be substantiating our hypothesis H1. In addition to this, a perusal, from a practical point of view, of the various experiments in Libet's tradition- not only the ones we have taken up for discussion, but others as well- will convince us as to the validity of the points 4 and 5 above.

As such, we can comprehend from the above compilation of points that empirical neuroscience has not yet been able to explain the phenomenon called RP, though the efforts at de-linking the phenomenology of it from the question of free will have succeeded to a certain extent.

All the same, the fact that RPs do occur conjoined with human action has not been rebutted yet. Then the questions remain: What are RPs? What do they stand for? And what existential significance do they assume in the psycho-physical being of humans? These are the questions that we will address from an existential-phenomenological perspective towards the end of the paper. Even before that, we have to analyse a few more empirical studies that will orient us towards that end.

**4. A Recent Stance** As indicated above, efforts are still on towards having a more satisfactory account of the neural processes reflected by the RPs and their implications on human action and life at large. And now we are bound to discuss such a proposition reached by K.S. Baker *et al.* (2011) as a result of a set of neuroscientific experiments rigorously planned in the light of the facts noted above, and towards answering exactly the same question posed above -a fact clearly expressed in the following excerpt from the abstract of their work published:

The initiation of voluntary action is preceded by up to 2 s of preparatory neural activity, originating in premotor and supplementary motor regions of the brain. The function of this extended period of pre-movement activity is unclear. Although recent studies have suggested that pre-movement activity is influenced by attention to action, little is understood about the specific processes that are involved in this preparatory period prior to voluntary action. (p. 3303)

Just like other experiments in Libet's tradition, in this one too, RPs were recorded averaged from EEG activity as participants made voluntary self-paced finger movements. However, the experimenters manipulated the processing resources available for action preparation using a certain strategy. The strategy adopted was that of combining a voluntary movement task with a secondary task in which the relative difficulty or "load" was varied parametrically, thereby limiting the degree to which resources could be allocated or engaged in the preparation for voluntary action. The two "load" tasks that were involved were namely perceptual and cognitive load tasks.

The perceptual load task involved the detection of pre-specified target letters amongst a rapid sequential stream of distractor letters, with load manipulated by increasing the visual similarity of target and distractor letters, thereby engaging limited-capacity selection processes.

The cognitive load task was a version of the n-back task designed by Owen *et al.* (2005) in which

participants were presented with a stream of letters and were required to match the current stimulus with the one presented up to two items ago, thereby placing substantial demands on working memory.

Participants executed sequences of simple, self-paced finger movements once every 4-5 s while their EEG was recorded to measure the neural activity associated with planning for voluntary action. They were instructed explicitly not to count or otherwise try to judge the time elapsed between each movement. While performing these movements, participants also completed either the perceptual load task or the cognitive load task.

Overall, they found that:

pre-movement neural activity was not influenced by the availability of selective attentional resources in the perceptual load task, whereas it was significantly reduced when cognitive resources were limited under conditions of high versus low working-memory load (Baker *et al.*, 2011, p. 3312).

And have come to the conclusion that their findings suggest that the earliest components of planning for voluntary action, and corresponding pre-movement neural activity, are strongly influenced by cognitive control processes that share resources with working memory.

Based on previous neuro imaging studies, and their own recent work, they have proposed that it is particularly movement timing processes - such as deciding when to move, or cognitive control involved in endogenously orienting attention in time ready for action - that modulate the early neural activity prior to voluntary action. They, therefore, suggest that, when performing voluntary self-paced movements, participants focus on deciding the right moment to initiate their movements, relying on cognitive control mechanisms for selection and endogenously orienting attention in time (*ibid.*). And finally, we have their most important suggestion:

We suggest that the earliest component of pre-movement neural activity, evident in the readiness potential, represents cognitive rather than obligatory motor planning processes, perhaps representing the cognitive control processes needed for focusing or orienting attention in time to that crucial point of movement execution, readying the system for action (*ibid.*).

Why this suggestion is important to us, we will see in the next section. Before that, corroborating these findings and suggestions, we have the results from another experiment (what may be called a sequel to the present one) conducted towards the end of the same year by Baker *et al.* (2012). In the experiment EEG was recorded throughout a time reproduction task in which participants replicated the interval between two tones with two button-press actions. The first action, i.e. the beginning of the reproduced interval, was somewhat incidental to the task of time reproduction and required minimal attention to the time of initiation, while the second action required explicit attention to the time of initiation. Here is the abstract of their findings:

Pre-movement neural activity preceding the first, relatively unattended movement was greatly reduced in amplitude and almost absent in the early stage, in contrast with readiness potentials typically seen prior to voluntary movement. Neural activity preceding explicitly timed movements was significantly larger, with effects emerging in the early component of pre-movement activity over frontal and right frontal scalp regions (Baker *et al.*, 2012 p. 715).

Based on these findings, the experimenters have proposed that attention to movement timing, i.e. the process of orienting attention in time towards the moment of movement initiation, is a key component of voluntary action preparation that is reflected in the early-stage neural activity typically seen prior to voluntary movement.

### **5. Relevance of the Findings to the Phenomenological Scheme**

The overall empirical method involved in the first of the last mentioned two experiments has been that of specifically examining the influence of perceptual and cognitive resources on readiness potential amplitudes i.e. the preparatory neural activity, originating in pre-motor and supplementary motor regions of the brain. This method was opted by the experimenters, keeping in mind the fact that the function of such RPs remained unclear and hence, with the object of shedding some light on the same. And they have come out with the suggestion that 'the earliest component of pre-movement neural activity, evident in the RP, represents cognitive rather than obligatory motor planning processes, perhaps representing the cognitive control processes needed for focusing or orienting attention in time to that crucial point of movement execution, readying the system for action'.

In the second experiment, the specific contribution of cognitive processes, proposed to be occurring during the earliest stage of planning voluntary actions has been investigated more thoroughly. This was done keeping in mind the suggestion from the first set of findings, i.e. attention to the timing of movement is a key voluntary process contributing to early-stage cortical activity. And the experimenters have come out with the proposition that 'attention to movement timing, i.e. the process of orienting attention in time towards the moment of movement initiation, is a key component of voluntary action preparation that is reflected in the early-stage neural activity we typically see prior to voluntary movement'-which clearly is confirmative of their earlier suggestion.

Now, this is only a proposition. Also, the demarcation of cognitive faculties from perceptual faculties has always been a norm of the neurosciences in terms of empirical as well as analytical convenience. However, in the conceptual schemes prevalent in the Philosophy of Mind, the said demarcation has not been taken so seriously except in the Merleau-Pontyan phenomenological alternative, which we have set as our standard. In this phenomenological scheme, ontological primacy is attributed to perceptual consciousness, whereas intellectual consciousness is conceived to be generative of temporality and thereby subjectivity in a derivative manner. Viewed from this perspective, the above findings and suggestions could be seen to be assuming immense existential significance. Under the Merleau-Pontyan scheme of human embodiment and perception we will be able to existentially harmonize these 'facts' pertaining to free will with that essential 'value' idealized in the conception of human freedom. Towards this end, we will first try to have a comprehensive grasp of this phenomenological scheme, and in that light, take up the findings again.

### **6. Merleau-Ponty's Scheme of Intellectual- and Perceptual-Consciousness.**

In his phenomenological account of human embodiment and perception, Merleau-Ponty draws a crucial distinction between perceptual and intellectual consciousness. Such distinction is drawn based on the peculiar phenomenology of our perceptual experience. From the phenomenology of sense perception, according to him, it is evident that it takes place purely in the spatial dimension of one's being where the subject of perception remains anonymous and opaque. Whereas subjectivity at the level of perception is attributed retrospectively, thereby invoking the temporal dimension and historicity of one's being. Thus, in that account, while perceptual consciousness is conceived to be identical with the spatial dimension of existence, intellectual consciousness is identified with the temporal dimension.

This scheme of perception is founded upon the idea of human subjectivity as a necessarily embodied point of view, wherein the body is itself already the concrete agent of all the

perceptual acts. Merleau-Ponty terms this conceptualization of embodiment, 'lived body'<sup>14</sup>. According to him, the lived body is the synthesizing point of perceptual events. And this synthesis happens always in the present. And in this process, the lived body projects around the present, 'a double horizon of past and future'- thereby giving the perceptual events a historical orientation.

While explicating the phenomenology of sense experience in his magnum opus, *Phenomenology of Perception*<sup>15</sup>, Merleau-Ponty puts forth the idea thus:

Perception is always in the mode of the impersonal 'One'. It is not a personal act enabling me to give a fresh significance to my life. The person who, in sensory exploration, gives a past to the present and directs it towards a future, is not myself as an autonomous subject, but myself in so far as I have a body and am able to 'look' (PP, 279).

In other words, the body 'takes possession of time; it brings into existence a past and a future for a present' (ibid.), and thereby creates time instead of submitting to it. And all this happens as a correlate of its eternal perceptual being which, as we have stated already, is impersonal and anonymous.

Now, the 'history' so created is not a genuine history in the temporal sense. "Rather than being a genuine history, perception ratifies and renews in us a 'prehistory' " (ibid.) That is, though the perceptual synthesis marks the present, the realization of such synthesis does not take place in the present. In other words, perception fails to realize the synthesis of its object simultaneously. And in this fact is contained the genesis of time.

It fails at this moment to realize the synthesis of its object, not because it is the passive recipient of it, as empiricists would have it, but because the unity of the object makes its appearance through the medium of time, and because time slips away as fast as it catches up with itself (ibid.).

Thus unlike the empiricist view point of human embodiment as a passive recipient of sensory inputs, in the Merleau-Pontyan scheme, body takes up an active role in perception, but fails to simultaneously realize this synthesis because this synthesis itself is generative of time, or simultaneity for that matter, the medium through which the object has to make its appearance. Merleau-Ponty admits it to be true that one finds, through time, later perceptual experiences interlocking with earlier ones and carrying them further. But he reminds us that nowhere in such experience does one enjoy absolute possession of oneself by oneself, since "the hollow void of the future is for ever being refilled with a fresh present" (ibid.).

Thus subjectivity as a temporal synthesis of the perceptual experience of the object appears always on the horizon of such experience. Now, such formation of subjectivity and the synthesis of the object is not any culmination but an ongoing and everlasting dialectical process, for every synthesis is both exploded and rebuilt in (or by the generation of) time.

There is no related object without relation and without subject, no unity without unification, but every synthesis is both exploded and rebuilt by time which, with

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14 This concept forms the foundation of all his philosophy. Since an exhaustive account of the same is impossible within the limits of this paper, we touch only on the necessary and relevant aspects for our purposes. For a quick grasp, see the relevant sections of: (Baldwin, 2003).

15 Hereafter referred to as *PP*. We confine the scope of our discussion to the ideas of the thinker contained in this seminal work.

one and the same process, calls it into question and confirms it because it produces a new present which retains the past. The duality of *naturata* and *naturans* is therefore converted into a dialectic of constituted and constituting time (PP, 279-280).

Viewed from the subjectivity point of view, this dialectic amounts to the ratification and renewal of a prehistory in terms of perception, and viewed from the temporality point of view, the hollow void of the future is refilled with a fresh present. Later on, while dealing exclusively with temporality, Merleau-Ponty further clarifies this inextricable nature of time and subjectivity thus: "To analyse time is not to follow out the consequences of a pre-established conception of subjectivity, it is to gain access, through time, to its concrete structure" (PP, 477).

And this exactly is what he does there. He analyzes time and space and lays bare the 'inception of subjectivity' in one's being- purged of any prejudiced conception of the same. He asserts that in the present and in perception, one's being and consciousness are at one. However, this is so, not because one's being is reducible to the knowledge one has of it, or it is clearly set out before her, but because perception is opaque.

... for it brings into play, beneath what I know, my sensory fields which are my primitive alliance with the world.- but because 'to be conscious' is here nothing but 'to-be-at . . .' ('être à . . .'), and because my consciousness of existing merges into the actual gesture of 'ex-sistence' (PP, 493).

He reminds us the fact that "it is by communicating with the world that we communicate beyond all doubt with ourselves"(ibid.). According to him, "we hold time in its entirety, and we are present to ourselves because we are present to the world" (ibid.). And hence for him, time itself is subjectivity.

Time is 'the affecting of self by self'; what exerts the effect is time as a thrust and a passing towards a future: what is affected is time as an unfolded series of presents: the affecting agent and affected recipient are one, because the thrust of time is nothing but the transition from one present to another. This ek-stase, this projection of an indivisible power into an outcome which is already present to it, is subjectivity (PP, 494-5).

Thus, according to Merleau-Ponty, perception is not a cognitive activity, but the realization of a generic and primitive 'self-world relation' characteristic of human existence, in terms and by means of the 'lived body' and instances of objective reality. And this takes place not in the full light of the day. Rather, what the sentient subject aims at in perception is recognized only blindly, in virtue of the lived body's familiarity with it and the subtle mechanics of the body schema.<sup>16</sup>

Also, in this scheme, 'existence' or 'subjective consciousness' which is sine qua non for cognitive faculties is equivalent to temporal consciousness. And this is accomplished only by being in the world strictly embodied and engaged in action, voluntary or otherwise. Now the very phenomenology of such 'being in the world' objectively spoken is the 'happenings' in the world

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<sup>16</sup> An elaboration of this concept is beyond the scope of this paper. Briefly, body as a 'system of present positions, as well as one open to an infinite number of equivalent positions directed to other ends' (PP,163) - poised and ready to anticipate and incorporate a world prior to the application of concepts and the formation of thoughts and judgments is what he calls 'body schema'.

that such embodiment is subject to, whether pertaining to one's own body or otherwise. But such happenings can only be there for such an 'existence'. The moment such an 'existence' grasps and seizes of such a 'happening', marks the upsurge of time, and simultaneously the upsurge of subjectivity. Rather it is only as time that such upsurge of subjectivity can happen, for the world is already there with the embodiment, as a pre-reflective communication, called 'perception'. Thus in the Merleau-Pontyan scheme, human action in general, doesn't necessarily presume subjective consciousness, or 'free will' in the technical sense for that matter. Only when the action is voluntary, again in the technical sense so far used, subjective consciousness is posited in the mode of creating temporality. And for that very reason, its phenomenology will strictly be retrospective for the 'subject' so constituted.

We now attempt an interpretation of the experimental results discussed so far, with reference to the phenomenological scheme explicated above. For this, it would suffice to focus on the inferences from the last two experiments that we discussed, as these experiments were presented as the culmination of our selective survey of scientific literature revolving around the phenomenon of RP and its bearing on the free will debate. Once again we remind ourselves that the general criterion for the selection of empirical data has been their stress on the nexus between consciousness and temporality. However in the last two experiments, we have seen such nexus being established based on a demarcation of cognitive faculties from perceptual faculties- which scheme conceptually resonates with the Merleau-Pontyan scheme of embodiment and perception that we have elaborated. Based on this resonance, let us try to understand the existential significance of the findings.

The inference from the first experiment suggests that the earliest component of pre-movement neural activity, evident in the RP, represents cognitive rather than obligatory motor planning processes. And the inference from the second experiment confirms this suggestion with more specific details. There, attention to movement timing, i.e. the process of orienting attention in time towards the moment of movement initiation, is proposed to be the key component of voluntary action preparation reflected in the early-stage neural activity that is typically seen prior to voluntary movement.

The first inference above could be seen to be making clear sense in the light of Merleau-Pontyan conception of human embodiment as the 'lived body' and its existential phenomenology. As we have seen already, perceptual and motor capacities of the lived body are accomplished anonymously without any subjective intervention. So RPs could consistently be conceived as having no role in these processes. Now this stance can accommodate the whole of neuro-scientific findings that we surveyed so far. However through them RPs have been confirmed to be real phenomena as well. Hence it remains to be explained what their real significance might be. We turn to this task now.

We have seen the suggestion from the first experiment, that the earliest component of pre-movement neural activity perhaps be representing 'the cognitive control processes needed for focusing or orienting attention in time'. And in the second experiment we have seen a probable confirmation of the same. Also we are convinced by now that there is ample neuro-scientific evidence for the scientists to put forth and defend such a proposition. However, there seems to be a conceptual redundancy in their propositions, inasmuch as they propose 'the cognitive control processes' to be needed for 'focusing or orienting attention in time'. This redundancy can be exposed simply by asking the question: 'orienting' whose attention? As a matter of fact, such redundancy is typical of the entire empirical tradition of neuroscience inasmuch as any attempt at answering this question immediately invokes what is notoriously known as the 'homunculus riddle'. So, within the present conceptual scheme unconsciously followed by neuroscientists and other stakeholders in the area of brain and mind research,

## **7. Existential- Phenomenological Interpretation of the Experimental Results**

such propositions seem to end up in some kind of an infinite regress. And this happens even when the experimenters have impressed us by making their findings empirically rigorous and logically inevitable, as has been the present case.

So what is wrong in the conceptual scenario? Wherefrom does such redundancy creep in? Just as we have hinted above, it is from nowhere other than the traditional conception of human embodiment and the resultant wrong idea of the 'mental'. The 'mental' when identified with the 'conscious', and thereby 'selfhood' and 'freedom' are attributed to it, such regression of 'homunculi' is bound to emerge. However, when the 'mental' is acknowledged, as we have explicated above, to have two aspects to it- namely, perceptual and intellectual, such discrepancy can be checked.

We have seen that, in the Merleau-Pontyan scheme, through such an approach the problem is sensibly addressed and resolved, so that there does not arise any such redundancy at all. In that scheme, the perceptual aspect which is essentially spatial in nature is conceived to be that passive and unconscious 'natural self' upon which we may construct any idea of 'selfhood' and 'freedom', only retrospectively through the creation of time. And such sense of temporality is what subjective consciousness is. Therefore, the question, 'orienting whose attention in time?' does not arise there at all, because creation of the temporal dimension itself marks attention or the creation of subjective consciousness. Rather, it is only as time that the upsurge of subjectivity can happen.

Thus, it is the temporal aspect of human existence that is crucial in invoking subjectivity and retaining it, and the whole idea of free will is founded on subjectivity so invoked. And given this scenario, we can readily make sense of the RPs and thereby the whole sequence of neuro-scientific experiments that we have related so far. Seen in the light of this existential scheme, RPs could safely be conceived as neuro-phenomenological markings of the invocation of temporality or subjectivity. And interestingly, the same fact has been specifically inferred in the second experiment above.

### **8. Reasons and Persons in a Merleau-Pontyan Version of Compatibilism**

We had started our discussion by observing the derivative connection between the phenomenal aspect of free will i.e. action, and the non-phenomenal aspects - decisions and intentions as either:

- i. the consequence of the subject's conscious consideration, or (at the least)
- ii. the subject's reasons for acting.

By now, our explication of the theme of free will seems to be mature enough for a revisit of this bifurcation. As we had promised, the first part of it has been addressed from an empirical point of view, briefly surveying the legacy of related empirical research as well as discussing some of the most relevant and contemporary research findings. We culminated the discussion by seeing for ourselves how accommodative of those findings has the Merleau-Pontyan idea of human subjectivity been. While proposing the said bifurcation, we had observed that the latter alternative had been inspiring rather a sociological and psychoanalytical approach, in contrast to the dominant empirical approach of the neurosciences as to the former. Let us now focus on this latter aspect with a view to bring to light a unique version of compatibilism that is inherent in the Merleau-Pontyan thought.

As we have seen, in the Merleau-Pontyan scheme, we can conceive any idea of 'selfhood' and 'freedom' only on the basis of that 'natural self' which is formed by the embeddedness of the lived body in the world. Now, the so formed autonomy, in an analogous way is embedded in the life-world of inter-subjectivity. Hence we will first try to have a better grasp of the notion of subjectivity in the context of the life-world and inter-subjectivity.

We have seen how the phenomenology of temporality invokes subjective consciousness. Once invoked, interestingly, it has the potential of assuming the whole of one's being. We have Merleau-Ponty's account of the situation and its bearing on the idea of free will as follows:

Consciousness holds itself responsible for everything, and takes everything upon itself, but it has nothing of its own and makes its life in the world. We are led to conceive freedom as a choice continually remade as long as we do not bring in the notion of a generalized or natural time (*PP*, 526).

But in the Merleau-Pontyan phenomenological scheme, we have seen that there is no natural time, if we understand thereby a time of things without subjectivity. And this is the natural consequence of the conception of temporality and subjectivity in that scheme. Therefore the situation mentioned above is unavoidable. There is, however, at least a generalized time- he acknowledges. And this is what the common notion of time envisages- "the perpetual reiteration of the sequence of past, present and future"(ibid.). However as we have seen in Sec.6 above, the phenomenology of such temporality is peculiar:

It is, as it were, a constant disappointment and failure. This is what is expressed by saying that it is continuous: the present which it brings to us is never a present for good, since it is already over when it appears, and the future has, in it, only the appearance of a goal towards which we make our way, since it quickly comes into the present, whereupon we turn towards a fresh future (ibid.).

Thus, this time is not the objective time of a 'cogito'. Rather it is

...the time of our bodily functions, which like it, are cyclic, and it is also that of nature with which we co-exist. It offers us only the adumbration and the abstract form of a commitment, since it continually erodes itself and undoes that which it has just done (ibid.).

This form of temporality is what we have analysed so far with the help of neuroscientific data. We have postulated RPs to be marking the neuro-phenomenology of the same. In the Merleau-Pontyan scheme, this is the foundational and generalized time which facilitates the inception and support of subjectivity known in the philosophical circles as the 'For itself'. Thus, as we have already seen, this subjectivity is foreshadowed by the 'natural self' (or the so called 'In itself' in the philosophical circles) formed of the lived body existentially embedded in the world. And according to Merleau-Ponty,

As long as we place in opposition, with no mediator, the For Itself and the In Itself, and fail to perceive, between ourselves and the world, this natural foreshadowing of a subjectivity, this prepersonal time which rests upon itself, acts are needed to sustain the upsurge of time, and everything becomes equally a matter of choice, the respiratory reflex no less than the moral decision, conservation no less than creation (ibid.).

Now, this exactly is what has happened in the philosophical circles. They have totally ignored the said natural foreshadowing of subjectivity and taken for granted what they call 'free will'. And then, everything is seen as a matter of choice. But as far as the scheme that we have adopted, we must remind ourselves with Merleau-Ponty that: "...consciousness attributes

this power of universal constitution to itself only if it ignores the event which provides its infrastructure and which is its birth" (ibid.).

We have seen this 'event' to be 'perception' as it is felt as the embeddedness of the lived body in the world. And according to Merleau-Ponty, "A consciousness for which the world 'can be taken for granted', which finds it 'already constituted' and present even in consciousness itself, does not *absolutely* choose either its being or its manner of being" (PP, 526-27).

What then is freedom?- he immediately raises this question and responds. And in his response we have an abstract statement of the version of compatibilism that we are trying to trace. It runs thus:

To be born is both to be born of the world and to be born into the world. The world is already constituted, but also never completely constituted; in the first case we are acted upon, in the second we are open to an infinite number of possibilities. But this analysis is still abstract, for we exist in both ways *at once*. There is, therefore, never determinism and never absolute choice, I am never a thing and never bare consciousness (PP, 527).

In our exposition of the Merleau-Pontyan scheme, we have seen the details of the event of the birth of consciousness referred to. And we already know that for a subjectivity so formed, the world cannot be taken for granted, for it is always in and of the world, that too as an intersubjectivity. Here is Merleau-Ponty's account of the cohesion of an intersubjective life and a world in terms of the phenomenology of the 'generalized time' that he has defended:

If the subject made a constant and at all times peculiar choice of himself, one might wonder why his experience always ties up with itself and presents him with objects and definite historical phases, why we have a general notion of time valid through all times, and why finally the experience of each one of us links up with that of others. But it is the question itself which must be questioned: for what is given, is not one fragment of time followed by another, one individual flux, then another; it is the taking up of each subjectivity by itself, and of subjectivities by each other in the generality of a single nature, the cohesion of an intersubjective life and a world (PP, 525).

We have already seen how time 'is the taking up of each subjectivity by itself', and how, that way, it resolves human action to be 'the consequence of the subject's conscious consideration'. Now we will see in some detail, how time is the taking up of subjectivities by each other in the generality of a single nature- 'the cohesion of an intersubjective life and a world'. And therein we will locate what we have termed: 'subject's reasons for acting' and thereby unveil a unique version of compatibilism contained in the Merleau-Pontyan phenomenological scheme.

We have him continuing:

The present mediates between the For Oneself and the For Others, between individuality and generality. True reflection presents me to myself not as idle and inaccessible subjectivity, but as identical with my presence in the world and to others, as I am now realizing it: I am all that I see, I am an intersubjective field, not despite my body and historical situation, but, on the contrary, by being this body and this situation, and through them, all the rest (ibid.).

Now, that marks the whole difference of the scheme. Human subjectivity for Merleau-Ponty is an intersubjective field, not despite its embodiment and historical situation, but, on the contrary, by verily being such embodiment and its situation. Now, how is this synthesis

carried out? He answers that it is by taking up the present. By 'taking up a present', one draws together and transforms one's past- altering its significance, freeing and detaching oneself from it. But one does so only by committing oneself 'somewhere else' (PP, 528).

This 'somewhere else' is facilitated in the normal case by the life-world in general. And subject's reasons for actions are to be sought in that inter-subjective field. In the peculiar context of psychoanalytic treatment, the inter-subjective situation is more specific and consequently the retrospective reasoning is more obvious. Just like how he brings out the phenomenology of perception through analyzing the so called 'pathologies'<sup>17</sup>, Merleau-Ponty brings out the significance of inter-subjectivity in the realization of freedom by analyzing this peculiar context.

According to him, psychoanalytical treatment does not bring about its cure by producing direct awareness of the past. Rather this is accomplished primarily by binding the subject to his doctor through new existential relationships. On the part of the patient, it is not a matter of giving scientific assent to the psychoanalytical interpretation, and discovering a notional significance for some situation in the past. Rather, it is a matter of reliving that situation as significant. And this the patient succeeds in doing "only by seeing his past in the perspective of his co-existence with the doctor. The complex is not dissolved by a non-instrumental freedom, but rather displaced by a new pulsation of time with its own supports and motives" (PP, 529).

Thus the general notion of 'intersubjective field' is instantiated in the context of psychoanalytic treatment as well. Here the field is formed as a binding of the subject to his doctor through new existential relationships. The field so formed facilitates for the patient, a re-living of the past situation by way of seeing it in the perspective of his co-existence with the doctor. And in that process, 'the complex is not dissolved by a non-instrumental freedom, but rather displaced by a new pulsation of time with its own supports and motives'.

We have just seen that this 'new pulsation of time' is what is creative of the consciousness of free will (in the form of subjectivity) in tune with the first aspect of our conceptual bifurcation. Hence, the above observation applies not only in the context of psychoanalysis, but in general to all cases of 'coming to awareness'. "...they are real only if they are sustained by a new commitment. Now this commitment too is entered into in the sphere of the implicit, and is therefore valid only for a certain temporal cycle" (ibid.).

Is it leading to determinism and there is no freedom possible? Or, don't we have any choice? 'Of course yes' - Merleau-Ponty would answer. But the choice which we make of our life is always based on a certain givenness- he would emphasize. "My freedom can draw life away from its spontaneous course, but only by a series of unobtrusive deflections which necessitate first of all following its course - not by any absolute creation" (ibid.).

If that be so, going back to the second aspect of the bifurcation, what is the significance of the 'subject's reasons for acting' in the Merleau-Pontyan scheme? And what is the bearing of such reasons on freedom?

This indeed is what is hinted at by referring above to the 'supports and motives' of the pulsation of time. What do they stand for? Can we identify them with the speculative ideas of this or that sociological or psychoanalytical theory? Or can they be merely the phenomenology of adaptive mechanisms of natural evolution experienced subjectively? Or, as has been the fashion in the traditional philosophical and theological circles, can they be the 'passions of the soul' or 'the reasons of a transcendental subjectivity'?

In all these alternatives, except the biological one, one fact is conveniently ignored. It is

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17 See for example Schneider's case discussed in (PP, 118-228)

the fact that, man as we analyze him, is essentially an intersubjective being, and thus his psychological and historical existence are inextricably intertwined. Once we try to tear asunder the latter of these aspects from the former, we will be compelled to resort to those alternatives for an explanation of the former. And only in that context do such theories have any relevance at all. But what is the lived reality?

Merleau-Ponty continues:

All explanations of my conduct in terms of my past, my temperament and my environment are therefore true, provided that they be regarded not as separable contributions, but as moments of my total being, the significance of which I am entitled to make explicit in various ways, without its ever being possible to say whether I confer their meaning upon them or receive it from them (*PP*, 529).

The integral nature of embodied existence and its oneness with the world is again stressed as the existential foundation of personhood. The meaning of actions, in terms of historicity and temperament, then assumes an ambiguous status. But this quality of existence is something constructive rather than self defeating. It gives the 'person', what Merleau-Ponty calls a certain 'style'.

I am a psychological and historical structure, and have received, with existence, a manner of existing, a style. All my actions and thoughts stand in a relationship to this structure, and even a philosopher's thought is merely a way of making explicit his hold on the world, and what he is (*ibid.*).

Let us have a re-look at what we termed 'subject's reasons for acting'. Just as we have noted already, any attempt at explicating this idea is bound to attribute an absolute innateness to the 'subject' and hence to the 'reasons'. However when we analyze it in the light of the observations quoted above, we can readily see that such innateness is not so innate indeed. Rather, it is defined and sustained by the transcendent motivations of the life-world. And then,

The fact remains that I am free, not in spite of, or on the hither side of, these motivations, but by means of them. For this significant life, this certain significance of nature and history which I am, does not limit my access to the world, but on the contrary is my means of entering into communication with it (*ibid.*).

Once this realization happens in one's being, then it is by being unrestrictedly and unreservedly what one is at present that one has a chance of moving forward. Or put in temporal terms, it is by living one's time that one is able to understand other times. Thus, as Merleau-Ponty insists it: "...by plunging into the present and the world, by taking on deliberately what I am fortuitously, by willing what I will and doing what I do, that I can go further" (*ibid.*).

According to him, one can miss being free only if one tries to bypass one's natural and social situation by refusing to take it up instead of assuming it in order to join up with the natural and human world (*ibid.*). And this is so not because of any sociological necessity either. Rather, this is owing to the peculiar existential makeup of mankind, that we have elaborated so far. "Nothing determines me from outside, not because nothing acts upon me, but, on the contrary, because I am from the start outside myself and open to the world" (*PP*, 530). Thus, existentially we need reasons and justifications because right from the beginning we are outside ourselves and open to the world. Verily as Merleau-Ponty puts it, all explanations of

one's conduct in terms of one's past, one's temperament and one's environment are therefore true, provided that they be regarded not as separable contributions, but as moments of one's total being consisting in a certain psychological and historical structure. And all one's actions and thoughts stand in a relationship to this structure but in an ambiguous manner. One cannot say for sure, whether he/she confers the meaning upon the structure or receives from it. Given this scenario, what do 'reasons' in the technical sense stand for? They are no more the free choices and plans emanating from an innate private 'self' or subjectivity for sure. Rather they are a kind of human responsiveness to the existential situation in which he/she finds him/herself embedded right from the beginning. And exactly this existential situation is what is creating any possibility of freedom at all, provided that he/she remains responsive, rather than refusing to take up such natural and social situation. This is why Merleau-Ponty says that by taking on deliberately what one is fortuitously that one can be free. It is a dialectical engagement rather than a positing act.

Thus in a unique version of compatibilism traceable in the thought of Merleau-Ponty, the source of reasons for human action is no more an enigma to be searched somewhere in the complex neuronal network or explained away by some ingenuous sociological or psychoanalytical theory. Nor is it situated in some innate private realm of the mental dimension of humans. It is to be sought in the very existence of each individual in the world as a thrownness into it and embeddedness in it which consists of psychological as well as historical aspects, natural as well as social aspects. As we have seen, in the Merleau-Pontyan scheme of embodiment and perception, such thrownness and embeddedness are materialized in the unique spatio-temporal phenomenology of individuals as 'lived bodies'. And in that phenomenology, the neuro-phenomenon of RPs could be intelligibly accommodated.

## 9. Conclusion

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