Modeling and Measurement of Interpersonal Attraction and Coordination in Charged Social Space-Time

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ABSTRACT

A new interpretation of consciousness proposes that states of the mind and behavior may be treated as containing a net electrochemical charge. In the electrodynamic model, interpersonal interactions would exhibit attraction due to complementarily charged states. While this hypothesis remains to be verified with neuroimaging and other techniques, it is important to consider how psychology would in principle be described using charges in social space-time. Extended analysis of data from a recently developed method is used to demonstrate how this would occur during optimally coordinated cognitive-behavioral activity, or interpersonal "synchronicity." In an earlier study, pairs of individuals were asked to converse for an initial period, separate, and return to talk again after making a decision about when they were ready to meet for a second conversation with their partner. In addition to the beneficial effects of mindfulness that optimized subsequent interactions, participants with similar personality traits also appeared to be aligned and returned with greater simultaneous coordination. The interaction of pairs in the study may be considered to resemble coupled particles in an EPR experiment, and is used to show how complementary simultaneous coordination can be understood within the context of "charged social space-time." Synchronistic moments of meeting are treated as coherent charge states that converge under effective conditions after an interval of time. The implication is that interpersonal attraction and bonding may create social structures that are uniquely described by fundamental electrodynamic principles. The nature of consciousness and social behavior may require a model using charge-like reactions that progress as a function of biophysical energy, space, and time. Here, a method and principles for the development of a practical model of electrodynamic consciousness is detailed.

Key Words: brain charge, electrodynamic, electrochemical brain, interpersonal attraction, coordination dynamics

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Introduction

Knowing precisely where to draw the line between metaphors of physics and an accurate description of reality is perhaps one of the biggest challenges when finding new ways to describe physical mechanisms of the brain and psychology. Certainly, the dynamics of the behavior produced by the brain and the body are the result of a biological system with a complex set of components that creates its motivations and actions. The thoughts and actions of individuals are the result of a complicated set of parameters determined by their internal regulatory systems and external stimuli such as the perceived needs and feelings of others. Beyond this basic biology and behaviorism, there are also many moments during the course of experience that entail a sense of physical order, trajectory, or other features that are well-described using concepts and terminology from the mechanics of physics. Common

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examples of this include descriptions of "momentum" in an activity, behaving in a "positive" or "negative" manner, being "in sync" with others, and "charging" one's energy or motivation.

It is clear that these physical descriptions of psychology are in some ways metaphors, but to a considerable degree they are appropriate ways of describing the underlying reality of the brain and behavior. At least some support for their validity begins with the simple fact that these physical terms are now very commonly used by both scientists and laypeople. The critical question lies in explaining *precisely* how the physics and chemistry is involved. For example, beyond the social context and intended psychological meaning, exactly what chemical form of momentum is really in the brain (Nevin and Grace, 2000), how do people become physically synchronized and coordinated to be "in sync" through their cognitive processes and biochemistry, and how is the brain really "wired" like an electrical circuit or another kind of electrochemical system? These questions and many others regarding physical interpretations of psychology have not been satisfactorily answered. Yet it is almost certainly the case that many of the technical terms used to describe social phenomena can be improved to increase their conceptual and scientific accuracy.

Key to addressing these questions is first to understand how the brain would be defined at the macroscopic level using microscopic principles derived from its neurobiology and molecular biochemistry. It is necessary to identify the true physical origins and characteristic principles of the phenomena so they can be properly applied at the macroscopic level. For example, to understand the nature of electricity and develop a complete theory of electromagnetism that would become fully practical, it was first necessary to assign charges to quantities of the electric "fluid" or substance. An electric-like or electrochemical theory of consciousness and psychology would probably begin the same way. This is because the bioenergetics of the brain and body are fundamentally electrochemically generated (Haas, 2011b; 2012a). In theory, there could be charges that arise from the brain's neural electrochemical activities that, when considered as an aggregate collection and extended properly to the macroscopic level, can be assigned to specific actions of the brain and body. Net charge states might correlate directly to higher biological functions and psychological states at the cognitive and behavioral level.

It is surprising that there is still such a poor understanding about how psychology could be represented as electrochemical charges in the brain and body. The scientific literature is filled with electrically suggestive terms such as psychological "attractors," emotional "valence," and positive/negative emotions or behavior (Haas, 2011a). To date, however, there are no theoretical models or empirical studies that attempt to explain how or why parts of the brain and consequent actions would be treated as net electromagnetically charged. It is particularly remarkable that what is called "positive" and "negative" activity is so often taken for granted to contain only a social or behavioral meaning while it evokes a strong electric-like quality. As it is well understood that all energy transitions are fundamentally electromagnetic in origin, the incongruity might be addressed by assigning an actual electrochemical charge to behaviors and cognition (Haas, 2012a).

To briefly summarize the new electrochemical model (Haas 2011a-d; 2012a), energy stored and transformed in chemical forms always contains a relative electrochemical charge and related potential. There will therefore be a net electrochemical charge that results from the increased energetic activity of a part, or set of parts, in the brain and body. This is due to the fundamental electrochemical nature of the brain's activity derived from its mitochondrial redox energetics during the creation of usable forms of energy; because it proceeds in a positive direction during the creation and use of energy. Additionally, there are also known to be task "positive" and "negative" areas of the brain during a particular cognitive or behavioral activity (Raichle *et al.,* 2001). It therefore follows that most neural activity can in principle be assigned a small relative net electromagnetic charge because higher levels of neural (or muscular) activity are electrochemically positive (Haas, 2012a). Similarly, there may also be 'static' neuronal states that contain a small net charge. For instance, the formation of a memory of a person or object requires a cellular neurochemical modification such as phosphorylation (net negative) that contains a small net charge relative to an unmodified or baseline state. Consequently, a representative charge with a quantitative energy or magnitude –

in classical terms, like a "cathexis" (Freud, 1899)– can then be assigned to particular affects, cognitions, and actions (Haas, 2012a). In contrast to isolated electromagnetic charges, these charges do not interact with each other through a direct Coulombic attraction/repulsion, except in the sense that they can be interpreted as components of an "equilibrated" dynamic network in the brain or a dynamic social system (Haas, 2011). They are abstractly quantified but real electrodynamic potentials that exert forces first at the biochemical level and then through macroscopic biological modes of action.

An electrodynamic or "electromagnetic" charge interpretation differs from other electrophysiological approaches in the way the source and locations of charge are defined. For instance, EEG typically measures activation of a broad area or defines a characteristic signature of a state of mind. In an electromagnetic model, the primary charges do not reside at the surface of the brain, nor do electromagnetic waves transmit information from the brain through space. The charges in a psychobiophysical interpretation are determined from the activity of specific locations in the brain and body that are currently best measured using chemically based imaging techniques such as MRI. In the model, electrostatic-like states are assigned to specific cognitions and behaviors such as memory formation, social cognition, motor cortex activation, or the energy used in a biomechanical movement. The psychobiophysical model derives the value of charge from what is active or stored chemically in specific locations the brain and is determined to represent the "net charge" of a resultant cognition or action.

When a charge is assigned to cognitive or behavioral activity, a practical electromagnetic description of psychology can begin (Haas, 2011b). For instance, due to the increased energy usage, being a speaker in a conversation or moving into position to talk with another person would be examples of net positively charged actions. Conversely, being a listener or passively waiting for another person to approach would be assigned a negative charge. These behavioral states are likely to be conversely positive and negative in other aspects as well. For instance, a receptive/passive listener may actively create a memory and impression of a speaker in his or her brain, which requires a positive mental action. A speaker may also be lower in his or her receptivity to others while speaking, or is negative in the things ultimately gained by speaking, and would thus be "negative" in those respects.

At the present time, for these particular behaviors, it can only be inductively reasoned and hypothesized that they are net positive and negative states of mind/action. The charge assignments must be verified by empirical techniques along with evaluation of all active and passive areas that allows for unambiguous assignment of a charge. The net result must take into consideration the global activity of the brain/body such that there is at least a small net difference between one state and another that can be decisively assigned a charge (Haas, 2011a; 2012a). Thus, for now, only best estimates can be made as to which activities, e.g. speaking, listening, or making a decision, would be assigned a charge.

What remains missing in the model is an example of experimental assignment and observation of how the "fundamental units" of charge would behave. Toward that objective, it is useful to continue to use the example of interpersonal interaction and coordination because it can be considered to represent a fundamental unit of behavior that is relatively straightforward to model electrodynamically. Interpersonal coordination can be simplified and measured as the net result of the decisions of two individuals to make a movement of the body and interact with each other.

Two people who choose to interact are likely to have a set of complementary aligned or matched interests (Kelso and Engstrom, 2006) that would contain attracting charge states. This alignment is caused by a set of specific variables that can be treated as a net attraction determining their interpersonal bonding and coordination dynamics. The collective features that attract one person to another can be defined as creating a net positive unit of action for the individual who actively seeks specific features or things. Conversely, the seeker is relatively deficient, or negative, in the things sought from another person. Two participants will therefore actively and positively seek things that are negative in themselves but positive in the other, even though those things may often be passively expressed (e.g., signs of social status, attractive appearance, etc.). This is similar to "laws of attraction" in that individuals will be attracted to others that complement themselves. But other

models have not assigned an actual electric charge.

If two people seek similar positive qualities or resources in each other, then each is actively and positively attracted to things that are needed to satisfy their relatively negative areas that can be quantified in their brains. This can be simplified into a digital-like decision that represents a basic choice to be present or not. It is like a momentary state of "limbic resonance" (Schore, 1994) that involves some coordination in addition to a subconscious emotional synchronization. Assuming the large energy of an emotional resonance in this case dominates the energy of smaller cognitive components, it can be described as a simplified (+/-) charge interaction utilizing a (+/-) in each brain. Pairs who are sufficiently interpersonally matched act "positively" to seek the other to complement their own negatively charged areas of desire and need. A pair of positive and negative actions are illustrated in the center of Figure 1.

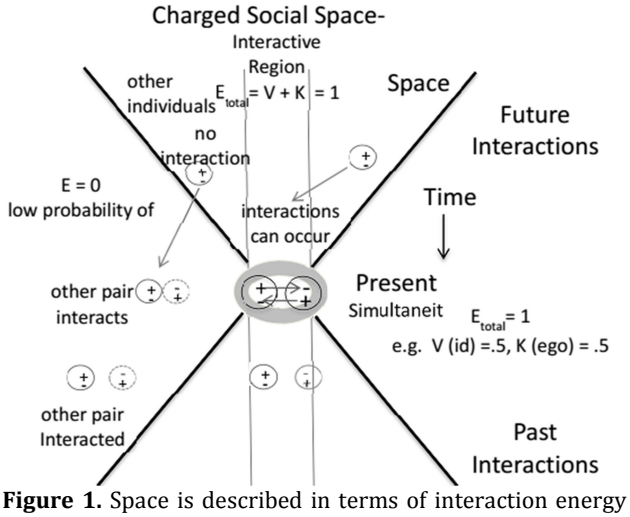

Figure 1. Space is described in terms of interaction energy with others in a field of charged individuals or dyads. The interaction in the center of the diagram represents a decision to interact between two people at a moment of consciousness. The center of the diagram represents an electrodynamic state of *consciousness* in the present moment where the dyad interacts with overlapping positive/negative areas. Both positively act (+) on the other who is negatively passive/allowing (-), and there is also a net productive (positive) conscious result. It may also be broken down into kinetic and potential components, such as kinetic ego/cognitive and potential id/limbic emotional energy. The space-time cone may also be thought of as the motion of individuals into and away from the location of consciousness.

The term "negative" is often intended to mean a suboptimal or less preferred behavior, or a null result. This is conceptually accurate in that it would indicate a lower level of a productive, healthy, or enjoyable activity. Negative states generally do represent a lower level of energetic activity. But this can be misleading because negative states define much of life. For example, sleeping or meditating are likely to be negative in many ways, but are clearly positive and beneficial for rest and rejuvenation (e.g., negative stress system activation is often good). Relatively negative areas will also exist in the brain that depend on things that when acquired, positively activate the associated system of the brain and body. Negative states are a necessary prelude and partner to action. The (+) and (-) areas or systems in two brains must therefore often mutually overlap, and ideally, create an additional net positive or productive sum. In the simplified model shown in the center of Figure 1, two pairs or four total charges are used, where a person acts positively (+) on the receptive negative features (-) of the other, and is conversely actively acted upon as well. There will be an exchange of positive and negative behavior, and there is also likely to be an additional positive or negative sum. A great deal of work remains to describe the full energetics and "spectrum" of psychologically active pairs and their net sums (Haas, 2011b).

The purpose of this paper is to provide details of a social charge model and demonstrate how such psychological attraction and "coupled" coordination works during interactive behavior. From a previous empirical study on synchronistic behavior (Haas and Langer, 2014), it was expected that dyads who are compatible and well-matched would become strongly bonded and coordinated. A pair of individuals matched on a sufficient number of variables was expected to want to do things together because their interests align. The net attraction could be modeled as a (+/-) in each brain that overlaps attractively with the other, as in Figure 1. After being given a choice about when to return to talk again after an initial conversation, well-aligned pairs were expected to re-interact with each other at a cooperatively timed and "charged" moment of consciousness. Optimally aligned pairs would return closer together and be more simultaneously coordinated. These moments of interaction were also considered to reflect an increased level of efficient conscious awareness, perhaps with less energy spent on tension or conflict (Haas, 2012b).

Data collected in the recently published experimental study is analyzed here in a further analysis based on personality alignment (Haas and Langer, 2014). In addition to the beneficial effects of mindfulness on interpersonal coordination, it was predicted that dyads well-matched on personality traits would exhibit a similar increased synchronistic alignment in decision-making after an intervening period between two meetings. Here, the goal is to demonstrate how the synchronicity would be modeled with a social space-time diagram utilizing electrochemical charges to represent the convergent alignment. The synchronistic coordination of partners is used as a unique example to illustrate how there would be an electrodynamic organization in a hypothetical "charged social space-time" model. Ideally, this dyadic coupling would represent a microcosm of group psychology that can be extended to build a broader electrodynamic theory of the mind and "charged" interactive social behavior. In larger groups and communities, people may interact within a universal "social field" of such charge pairs.

Method

Details of the experimental method and results are published in an earlier issue (Haas & Langer, 2014). In brief, the experimental design involved pairs of individuals who would meet for a short conversation on any topics of their choosing. After the initial 15 min. conversation the individuals were separated. They were then given a choice about when to return to meet with their partner again by instructions that told them to return to the meeting room when they felt ready. There were 45 pairs in total, and 22 were given a mindfulness enhancement treatment of "noticing things" about their partner. Independent of the mindfulness treatment, it was also predicted that pairs in both groups would exhibit synchronicity when well-matched on personality traits.

For the analysis of data in this paper, the goal was to evaluate the correlation of personality matching with increased simultaneity of coordination within dyads. The dynamics would be modeled as socially charged interactions in space and time. For purposes of describing a physics of consciousness, the dependent variable emphasized in this paper is *simultaneity* in social space-time. It is modeled as a coherent convergence in the present moment of consciousness as an interaction of complementary charge pairing. Personality matching modeling was simplified and performed using similarity in 4 traits from a brief personality inventory, including conscientiousness, agreeableness, intelligence, and introversion/extroversion (Donnellan *et al.,* 2006). Neuroticism was excluded because it is by definition the one trait that is expected to decrease productive alignment and functioning; and it in fact trended toward an inverse correlation with simultaneity.

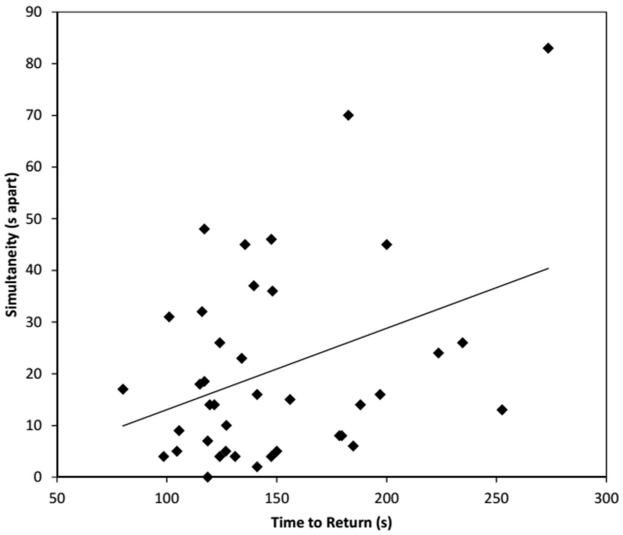

Figure 2. The *time to return* for a second conversation (pair average for each dyad) is plotted with the *simultaneity* of sitting down across from each other again. The remarkable correlation of simultaneity with time can be considered to resemble a space-time diagram where the most optimally aligned pairs converge with higher efficiency at the present moment of consciousness (full simultaneity ~ 0 at the intersection with the x-axis).

3. Results

In Figure 2, a remarkable feature is emphasized by plotting the correlation of simultaneity with time of return [$r = .39$, $R^2 = .15$, $p = .0065$, one-tailed]. The correlation of simultaneity with dyadic average time to return (mean of the two partners) can be thought of as a convergence at the *present* moment of space-time where optimal interactions occur with increased simultaneity. Poorly matched pairs do not converge optimally in the present moment. The effect cannot be attributed only to the shorter total elapsed time (Haas, 2012b); and how other variables such as enjoyment caused an increased speed of return is discussed in the original study (Haas and Langer, 2014). Personality matching did closely approach

significant correlation with simultaneity as shown in Figure 3 [r = .25, R^2 = .062, p = .058, one-tailed]. Thus, the data collectively showed that well-matched pairs often attract and interact with increased efficiency in what may be interpreted as a highly present moment of consciousness in the center of a space-time diagram.

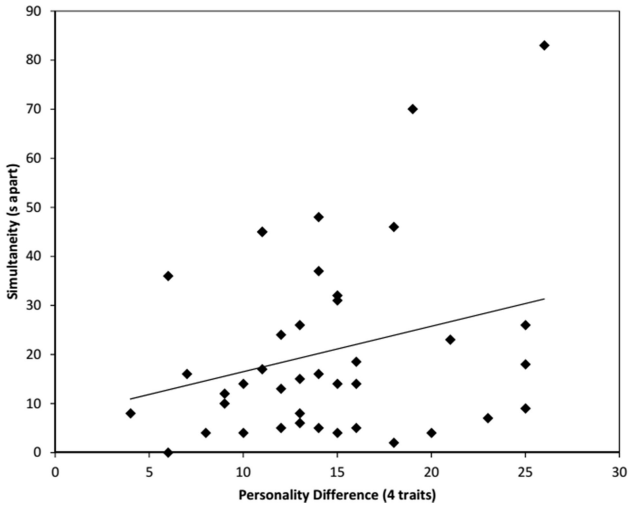

Figure 3. Personality matching is plotted with simultaneity to show how it improves coordination and results in coherent moments of alignment. Personality matching is expressed as degree of dissimilarity in the figure, where a smaller difference in personality between partners leads to improved simultaneity.

Discussion

It was predicted that personality matching would create an optimized interpersonal attraction and a coherent coordination. Dyads matched on personality traits did display substantially increased simultaneous coordination. This kind of coordination is treated differently from synchrony in that there is a moment of simultaneous alignment that is a function of a period of intervening time and separation. This is similar to the separation of quantum particles in an EPR experiment (Einstein *et al.,* 1935) where the coupling is dependent on previous bonding. The temporarily separated partners remain emotionally connected through a conscious and subconscious coordination of their cognitive and biological processes. The synchronization is not caused by the matching of specific movements as in identical mimicry, although it is possible a small amount of following of the other returning partner occurred. The study was designed to measure an effect that most closely resembles the emergence (Cambray, 2002) of an efficient state of mutual interaction after an interval of time, much like a classical synchronicity (Jung, 1955). The alignment of a productive meeting at a "moment of time" (Hogenson, 2009) is defined as a form of cooperative interpersonal synchronicity that is mutually beneficial (Haas & Langer, 2014).

Understanding the causes of such interpersonal synchronicity is of great interest, but in this paper personality matching was selected mainly to demonstrate how well-matched pairs would converge in the center of a charged social space-time diagram. The primary theoretical goal of this paper was to demonstrate how optimal coordination may be treated as the center of a space-time diagram where the interaction is an attracted and aligned charge pairing. In this case, the present moment of space-time is defined as simultaneity at the spatial location of the consciousness of the two individuals. The net alignment of brain and behavioral charge states are expressed as two pairs of charges in a (+/-) interaction, with overlapping charges between the two brains. In this case the positive action (+) of seeking the other person occurs in both brains and negative (-) passivity or allowing creates space for the other person to act as well. There is an exchange of "positive" behavior at the chosen moment of their decisions, where each receives beneficial things from the other. There is complementation and activation of each person's negative regions during positive action. The result is an attractive effect, where there is also likely to be a net positive social sum in addition to the other electrochemically positive actions (e.g., the establishment of a friendship, successful achievement of a task, etc.).

There is obviously not a bond that directly physically connects and tethers two people, except before birth. The coupling must originate from the compartmentalized biochemical dynamics and chemical "bonding" in two brains that result in a cooperatively timed decision and coordinated actions as a function of time. This attraction may resemble the concept of an electric ion pair or even the wavefunction in a quantum mechanical bonding orbital that contains positive and negative potential regions. The dyads become specifically attracted through higher level neurobiological structures and biological factors, such as personality matching, interpersonal liking, facial recognition, memory, etc. But they also become coordinated in a fundamental physical biochemical way. This level

may be best described as a chemical-like interpersonal state within a "social field" of pairs of ionic-like states that have many degrees of freedom. There may be an abstracted form of a real chemical or electrochemical connection that translates into a unique kind of behavioral mechanics. The result is the emergence of a simultaneously coupled state like that of a quantum entanglement experiment, although in this case the variables and connecting "spooky factors" are known.

A full neuroimaging analysis will be required to prove that an individual's mind can be treated as net charged, and that the positive and negative areas do complement each other between individuals in this way during interactions. While it remains a hypothesis that interpersonal attraction, coordination, and the mind itself, are indeed positively/negatively charged, there are other possibilities that may be considered. For example, the charges may be conserved and equilibrated in special ways. For instance, in the synchronicity of returning to the room and sitting at the same time, it might be shown that both individuals positively seek to satisfy roughly equivalent magnitude negative areas in their brains – an equivalence that may establish social "equilibration," balance, and comfort (indeed, comfort was increased (Haas, 2012b)). It is also assumed that productive attraction is sufficient to overcome "repulsing" variables and that there would be at least some charge balancing mechanism that allows for creation of a stable social structure and organization. These kinds of effects (e.g. enjoyment and comfort) were observed in behavioral measures and surveys. All that would be required to substantiate the model is measurement of events at the neurochemical level and assignment of charges.

The principles are likely to apply to many other types' exchanges in interactions. These are relatively easy to measure and quantify as positive activations and negative (low) activities. For example, the fine-tuned turn taking dynamics during a conversation appears to be strongly coupled in a symmetric way in MRI imaging (Stephens *et al.,* 2010; Lerner *et al.,* 2011). The activations occur at the same time, or synchronistically, in a complementary manner between two people. Similarly, there might be an agreement of opinion on an intellectual or political matter, or of course a sexual attraction. It will probably be necessary to carefully break down most interactions into components at the rational cognitive level (structurally simplified as "ego" or "superego") and a magnitude at the "limbic" (traditionally defined as "id"; see Haas, 2011b). For instance, "limbic resonance" activates large portions of the brain, but a baseline level of this could be subtracted out of many interactions so that a cognitive component can be distinctly calculated. An ego or superego level might be treated separately as an area or system of rational knowledge. In that case, an older person might be treated as containing a higher net positive charge than a younger one.

The term "synchronistic" can be understood differently than a traditional synchronicity (Jung, 1955) or synchronism. It is behavior or action that is simultaneous in time where there is some matching/alignment of reasons for being so. Interactions perhaps always require some alignment of goal seeking, even in cases where there may be competition or conflict. For if there were no similar objects of desire and no reasons for involvement with others, there would be no incentive to interact at the same time and place. Thus, perhaps all interactions may be considered synchronistic in the sense that they are motivated cooperative (or uncooperative) actions that occur at the same time. The problem is mostly about knowing and quantifying the reasons why they are or are not effectively aligned and coordinated.

If the reality is that psychology and social behavior begins with the generation of motivational, cognitive, and behavioral charges, then mental and bodily space perhaps must be defined in these terms. There may be a social field of compart*mentalized* social charges resembling that of ions in an aqueous solution or cells. In this case, the biochemical charges originate independently in spatially separated brains, though to a considerable extent they are also specifically bound to other individuals through memory and recognition. Groups may therefore form social structures in a kind of space-time that is described by quantities of mentally linked charge (Figure 4). For example, others have described how biological organisms occupy a location that is part of the fabric of space (Sheldrake, 1981). But the microscopic quantum level may be statistically dominated by classical-like processes when extending to the macroscopic regime. Therefore, the kind of charged space-time proposed here must be considered most like that of a classical chemical

or *electrochemical* field of charged ions (Haas, 2011d).

The dyadic charges within such a social field are interchangeable because people can travel relatively freely from one area to another. One person often substitutes for another. Charge balanced states are generally sought from within a field of other interpersonal possibilities, with specificity imprinted for certain individuals. This creates a social field and structure with a social fabric constructed of many different pairs or groups who interact at different locations. A preliminary representation of this is illustrated in Figure 4. The figure shows that there are many pairs who will interact at other locations, and other individuals eventually come into the focal region of consciousness as in Figure 1. There will also be a mental map constructed from prior interactions that can create knowledge of the past and impending future shown in the space-time diagrams.

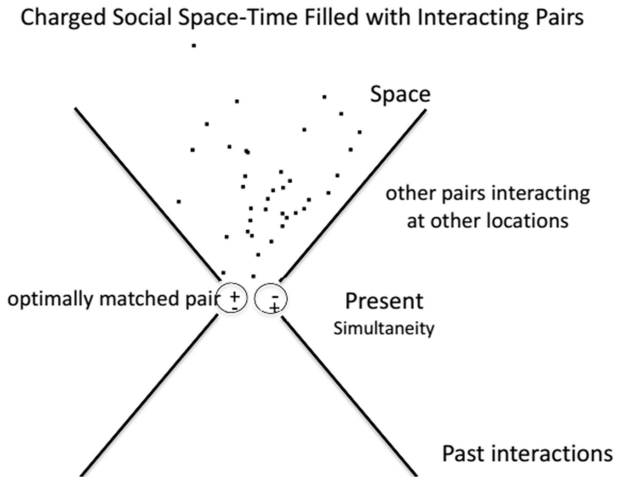

Figure 4. The data from Figure 3 is rotated 45 degrees and plotted so that simultaneous pairs funnel toward the center. For a given pair, aligned interactions occur in the present moment of consciousness at the center of the diagram. In the reality of ordinary life, many of the pairs in the diagram would choose not to meet, or they would represent pairs who meet elsewhere in space. In theory, present interactions would be calculable from the future-like region using the energetics of the space-time diagram, such as in Figure 1. A collection of these pair interactions may be considered to represent the social field of a group or community. Thus, information about others resides in all individuals' memories such that the center of the diagram will be substantially equilibrated with the other regions of social space-time.

The social charge and space-time diagram models can be a very useful tool for social modeling and understanding. There are many other implications if human consciousness is described in these units of charge based on electrochemical potential and kinetic energy (Haas, 2011b). For instance, aging may in fact be increasingly positive at the kinetic at the cognitive level as the body becomes increasingly negative in its potential. That is why a young person (+ bodily kinetic, - id potential) would often be paired with an older one (+ cognitive or "superego" kinetic, - body kinetic) during the transformation of emotional potential energy to knowledge and experience. The meaning of many interactions may be understood in this way, and application of the principles in this manner may be one of the most important extensions of the model. In fact, another insight yielded by this model is that all emotions and active cognitions may be inherently positive due to their increased activity level. The question is largely about what receptive/passive processes they are usually paired with. Ultimately, charges and active-passive charge pairs could be assigned to the full spectrum of human cognition and action, and the different types of interactions.

In a final example, two individuals or groups in competition may in theory both be positive in seeking the same object or resources, creating a suboptimal repulsive (+/+) force or conflict. Consequently, at times it would be effective to avoid tension or conflict using what is typically considered an emotionally "negative" avoidance response. In the synchronicity study, this type of response may have been observed in many cases when there was a delay in returning to meet between poorly matched partners (Haas and Langer, 2014). Any interaction would in principle be most energetically favorable as an efficient (+/-) interaction. A so-called "negative emotion" of fear and avoidance would therefore not be entirely negative if it is positive in other ways. A reinterpretation of a response of fear and avoidance of something might be that it is electrodynamically and psychologically positive. For instance, moving away from danger requires positive action and may increase survival and overall well-being. It is only when the fear or helplessness becomes an excessively "negative" and dysfunctional mindset that it becomes truly unhealthy and destructive.

It is not yet customary to think of psychology and social behavior in terms of actual electrodynamic charge and energy. It will not be easy to move beyond the common usage of these terms to the newer electrodynamic conceptual improvements. But the idea of "positive" and

"negative" actions, the simple constructs of "being in sync," "recharging" energy and "momentum" (which is essentially a form of chemical charge), have been explained in a more accurate physical scientific way. The hope is that these ideas and new interpretations will be supported by further research, and become increasingly understood and accessible. Eventually, it may be possible to construct a broader model of psychology and consciousness from these principles. Most importantly, it will become possible to enhance and optimize conscious experience, and to achieve states of synchronicity that increase health and happiness.

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