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John Henry Reilly

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# Peripheral Minds: An Abridged Phenomenological Analysis of Dyslexia

John Henry F. Reilly

## ABSTRACT

This paper endeavors to provide a novel way of understanding Dyslexia through the phenomenology of Edmund Husserl. Dyslexia is currently defined as a neurodevelopmental disorder. It is “a specific and persistent learning disability affecting the acquisition and development of the written language code (reading and spelling) and causing significant handicap to academic achievement and/or activities of daily life.” This medicalized definition has several conceptual problems and does not commensurate with the lived experience of Dyslexic people.

Dyslexia is therefore defined by *negation*—it is defined through what it *is not*. This paper utilizes Husserlian phenomenology to work toward a definition of what Dyslexia *is*. Phenomenology helps illuminate a collection of attributes of Dyslexia and enables us to conceptualize it as something more than a disability which must be fixed and remediated.

Lanei Rodemeyer’s work explicates Husserl’s analysis of embodiment on 5 distinct but interconnected levels: Hyletic Flow, Passive Synthesis, Active Synthesis, Intersubjectivity-1, and Intersubjectivity-2. This paper analyzes Dyslexia at the first 3 levels, focusing on Active Constitution. Several studies have demonstrated that Dyslexics have stronger peripheral vision and weaker focal vision compared to controls. With a “peripheral bias,” a Dyslexic experiences raw Hyletic sense-data differently than a neurotypical person. This leads to differences on the level of Passive Syntheses, namely a comparative difference in orthoaesthetic, motivated sensations, associations, and affectivity. On the level of Active Synthesis, Dyslexics can consequently conduct categorial syntheses through the faculty of Phantasy, i.e. Dyslexics can *think visually* rather than linguistically, a phenomenon widely reported by Dyslexics.

## Keywords

Phenomenology, Dyslexia, Husserl, Neurodiversity, Neurodivergence, Visual Thinking, Peripheral Vision

## Introduction

In Ideas II, Section 18f, Edmund Husserl describes someone meeting people for the first time. This person realizes that objects which seemed stable, real, and enduring are not experienced by other people. She realizes she was “hallucinating,” and from the perspective of the intersubjective community, she becomes a “*pathological Object*.” This marks a turning point in Husserl’s argument from a solipsistic account of Objectivity to an intersubjective one. In short, only through intersubjective verification can something truly be made an Objectivity for Husserl.

This turning point is also strictly theoretical—it could not occur in reality in this way. Simply put, cultural context would necessarily play a role in this situation if it were real. The context of the *Lifeworld* will shape how people understand an individual who experiences things which “thoroughly conflict with other’s experience in experiences” (Ideas II.18f) For instance, if you lived in the Judeo-Christian context of antiquity, the aforementioned “hallucinations” could be interpreted as divine revelation; the recipient of such revelation may be extolled as a prophet or shunned as a false prophet. In such cases, this person is not rendered a “*pathological Object*,” their experiences are intersubjectively interpreted in a different way.

Yet while Husserl’s thought experiment is merely theoretical, one cannot help but notice the plausibility of the situation. It matches so many real-life scenarios of the “mentally ill” being institutionalized in our modern context. Here, an underlying trait of our own *Lifeworld* becomes easier to discern. In our *Lifeworld*, it appears as though individuals whose experiences “thoroughly conflict with what others experience in experience” are frequently made pathological objects. Pathologization—especially medical pathologization—often goes beyond hallucinating the reality of objects in the material world. Modern Medicine often diagnoses forms of pathology which are not outwardly hallucinated, or even inwardly experienced.

Here, a problem arises with great stakes for me personally. I have a genetic neurodivergence, one which has been medically pathologized and publicly shunned for over a century. Depending on when and where I could have been born, I would likely be clinically diagnosed as “feeble minded” or “mentally

defective” on the Binet-Simon scales (Binet, chapter 2), as a “moron” by Henry Herbert Goddard’s metrics (Smith 21, 23-26), as having “unspecified mental retardation” by the DSM II and earlier psychiatric manuals (as my father was) (DSM II, 14), I could have been diagnosed with “Congenital Word Blindness” (Hinshelwood), or in today’s diagnosis, “Dyslexia.” This may sound like dramatic hyperbole, but the facts speak for themselves.

These facts reveal a real-world analogue for Husserl’s theoretical “pathological Object,” but in an inverse sense: As a child I could *not* see or decipher what the intersubjective community sees and deciphers—written words. There was not hallucination, but absence and confusion.

Dyslexia today is categorized as a “Neurodevelopmental disorder.” Officially, it is “a specific and persistent learning disability affecting the acquisition and development of the written language code (reading and spelling) and causing significant handicap to academic achievement and/or activities of daily life” (HCN, 2013). In the United States, Dyslexic children are medically diagnosed with a neurodevelopmental disorder, given legal status as Dyslexic for educational oversight, and then remediated within the educational context.

Obviously, recognition in these spheres shows immense progress. Yet four notable problems remain within Dyslexia’s current medical definition. Firstly, in philosophical terms, Dyslexia is defined by negation, i.e., it is defined through what it is *not*—it is a “*disability*,” a “*handicap*.” There is no official definition of what Dyslexia *is*, or any official adumbration of positive traits which accompany it. Definition by negation can have shortcomings. For instance, if one wants to define a “chair” by negation, one might say that a chair is *not* a banana, it is *not* a stool...etc. This can be extremely helpful in many respects; but in the case of Dyslexia, it is both vague and imprecise. Furthermore, defining Dyslexia by negation echoes a violent history of medically pathologizing Dyslexic people. Before the DSM III, Dyslexia was widely considered non-existent in the medical community, and those with Dyslexia were viewed as unintelligent. By defining Dyslexia through what it is not, and solely as a problematic “*disability*,” the current definition appears as a modern descendant of outdated and unfounded viewpoints. This is the second problem with Dyslexia’s current medical definition.

Thirdly, Dyslexia's current conceptualization frames it as a *problem* which must be fixed and cured, as we see in terminology like "disorder" and "remediation." Because Dyslexics have a "problem" which must be fixed, their diagnosis inevitably carries with it a sense of being *made* a problem, it often instills a sense of inferiority within Dyslexics who are lucky enough to be diagnosed (of course, those who are not diagnosed suffer an even worse fate). Thus, some problems arise for those with the "disorder" of Dyslexia precisely because of the *conceptualization* of the disorder, and not from the disorder itself. There are also logical problems with the current definition, showing a fourth problem. At 31 years old, I can read and my legal status as a Dyslexic has expired. Therefore, I am no longer medically or legally Dyslexic. But if you ask any Dyslexic person, they profess that they still "feel" Dyslexic even after their remediation. I certainly do.

Can we conceptualize and define Dyslexia in a different way, one which says something about what it *is*? One which can combat connotations of inferiority? One which can honor and account for a Dyslexic's actual lived experience?

The answer to all these questions is *yes* and brings the thesis of this paper to the fore: A phenomenological analysis of Dyslexia can supply a *positive* or *affirmative* account of Dyslexia in terms of its tendency towards spatial-visual thinking. In other words, we can start to think about what Dyslexia *is experientially*, understood from the perspective of a Dyslexic person, rather than what it is *not*, understood from an external medical perspective looking at a Dyslexic person.

Methodologically, this paper utilizes Lanei Rodemeyer's 5 Husserlian "levels of embodiment" as a tool for phenomenological analysis, a brief summary of which appears below. Structurally, this version of this paper is composed of two parts and a conclusion. Part I paves the way for a phenomenological analysis of Dyslexia. Part II discusses how Dyslexic experience differs from other people on the levels of "Hyletic Flow," "Passive Synthesis" and "Active Constitution". In sum, Part II sketches out how a peripheral bias in perception can plausibly allow for a particular form of spatial-visual thought to emerge. Because of the word limit for this publication, the original paper had to be cut to less than half its original length, and the following phenomenological analysis is merely an outline of the original work presented.

## **PART I: Initial Problems**

Two problems plague this paper from the outset. One is empirical while the other is phenomenological. Empirically speaking, there is no clear evidence that “Dyslexia” has any affirmative traits beyond the difficulty with reading. It may not be a single neurodivergence, but instead a wide array of differing neurodivergences which only share the common trait of reading difficulty. In such cases, Dyslexia cannot be defined or understood further, because there is nothing else which unifies all Dyslexics as “Dyslexic.”

Secondly, there is the open question as to whether phenomenology can helpfully provide insight on this problem. Phenomenology requires the methodological analysis of first-person experience, and often attempts to understand transcendental structures of experience. I have my experience which I can phenomenologically analyze, but it is difficult to demonstrate how the structure of my experience is the same as another Dyslexic’s. Furthermore, it is extremely difficult to explain how any experiential commonality between two Dyslexics is divergent from a “neurotypical” person. Such arguments necessarily transcend strictly first-person analyses and do not delve into the depths of transcendental arguments.

However, at least one aspect of Dyslexia can counteract this phenomenological problem and provide a tentative solution to the empirical problem (insofar as extensive evidence suggests an invariant commonality among all Dyslexics, even when considering sub-types of Dyslexia, and no known evidence contradicts this tentative invariant commonality). The solution to both problems emerges from several studies which have found a “peripheral bias” among Dyslexics, i.e., they possess stronger peripheral vision and weaker focal vision. While this evidence is conducted through empirical scientific studies, these commonalities can be used as a starting point for phenomenological research of Dyslexia, as the next section will endeavor.

Firstly, the evidence for Dyslexic “peripheral bias” must be understood. Eight major studies all suggest Dyslexic test-subjects have stronger peripheral vision compared to controls, even if the Dyslexic

subjects are divided into sub-types. These eight major studies can be categorized into two general types of testing, one looking at peripheral clarity of vision, one ophthalmological.

The first kinds of tests used a tachistoscope “to briefly flash (for ~10-25ms) pairs of letters simultaneously in the center and in the periphery, observing accuracy of response as a function of eccentricity for the outermost letter” (Schneps, et al, 132). Researchers discovered that Dyslexic test-subjects performed “slightly worse” than normal test-subjects within the “central field (within ~5°),” however they “performed better than controls” when the letter was presented in the periphery. “Specifically, whereas normal readers could not identify letters above chance level at an eccentricity of ~10°, dyslexics performed at above-chance levels as far out as ~12.5°. In fact, one severely dyslexic man was able to recognize letters at ~20° eccentricity” (Scheps, et al, 132). This study was replicated and independently confirmed in two other studies in 1989 and 2004. Two more studies used computers, which were less precise compared to the tachistoscope, and showed partial support of the four major tachistoscope studies (Scheps, et al, 132). However, these computer-based studies are considered non-replicant studies due to their lack of precision (Schneps, et al, 132), and it is worth noting that they did not offer contradictory evidence. Here, four replicated studies and two non-replicant studies all corroborate evidence of stronger peripheral definition for Dyslexics. Furthermore,

A second set of two studies used more traditional ophthalmological strategies. They used technique of kinetic and static perimetry, common in ophthalmology, to map peripheral sensitivity to low-level color and intensity contrasts in dyslexics and controls. They found that, whereas average readers were able to identify colors to ~10°-20° eccentricity along the horizontal meridian, subjects they classified as severely dyslexic could identify colors as far out as ~40°-60° eccentricity. (Scheps, et al, 132) These findings were consistent with evidence found in postmortem histological studies in 1991 and 2006. In total, four total ophthalmological studies of varying kinds corroborated evidence that Dyslexics possess stronger peripheral vision compared to normal people.

In total, eight peer reviewed and replicated studies all show that Dyslexics have stronger peripheral vision and weaker focal vision than controls (neurotypical people). This provides tentative evidence that Dyslexia is more than a collection of varying neurodifferences which are only united by a difficulty with reading. Furthermore, these studies suggest that Psychological, Neurological, and

Educational discourses may have a limited understanding of Dyslexia because they over-fixate on the difficulty with reading. In short, Psychological and Educational discourses focus on the foetal weakness in Dyslexics—which contributes to the difficulty with reading—and simultaneously fail to examine the peripheral strengths. They see the glass half empty and fail to recognize it as also half-full. This pushes potential positive traits of Dyslexia to the periphery, as it were.

With that, phenomenology proves advantageous for navigating these thorny issues. Research on peripheral vs. focal strength exemplifies some flaws inherent to scientific-medical research on Dyslexia. Scientific analysis focusses on how peripheral vision uses a completely different part of the brain compared to focal vision. Questions center on whether these differences are caused by neurology (i.e. stemming from the brain) or physiology (i.e. stemming from the distribution of “cone cells” and “rods,” etc. (Schneps, et al., 129)). The issue is that we experience our sight as one gradation—no one experiences their distribution of cells, or which regions of grey matter they predominantly use. These scientific questions deal with causality, not experience. As mentioned above, Psychological and Educational discourses fixate on one problem Dyslexics experience at the expense of other aspects of the condition, and this calls their “objectivity” into question. A phenomenology of Dyslexia looks at experience itself, and takes experience seriously. Consequently, a phenomenology of Dyslexia remains faithful to a Dyslexic’s lived experience, and does not risk alienation and pathologization like the neurological approaches do.

## **PART II: Hyletic Flow and Passive Synthesis**

A major inspiration for this analysis is Lanei Rodemeyer’s “Levels of Embodiment,” which differentiates 5 distinct but interconnected “levels” of embodied experience which Husserl examines throughout his career. The first level is “Hyletic Flow,” or the raw sense data of experience—for instance, the many colors we see, the sounds we hear, etc. While Hyletic Flow (“HF”) provides raw sense data, all these sensory experiences are always mediated by Passive Syntheses (“PS”), the second level. “Passive Syntheses” operate on a subliminal level we are unaware of; these processes make the flood of one’s



sensations discernable. As you read this paragraph, Passive Syntheses allow you to discern the colors of white and squiggly black lines as letters printed on a page. They allow you to discern the colors around you as a “chair,” a “table,” etc.. “Active Syntheses” (“AS”) operate on a third level. This is the level of conscious experience, purposeful attention, and thought. When we think about experiencing any given moment, we usually harken to what occurs at the level of Active Syntheses. The fourth level is called “Intersubjectivity-1” (“IS-1”). This is the level whereby we interact with people around us and are in turn shaped by them. Finally, there is the fifth level of Intersubjectivity-2, or the *Lifeworld* (“IS-2”). This is the larger cultural paradigm in which one lives; the *Lifeworld* provides the cultural lens through which an individual and social group makes sense of the world, and by extension makes sense of their own selves.

Because this publication could not accommodate the full length of the original argument, the analysis of Hyletic Flow and Passive Syntheses has been cut. However, a brief summary of this analysis is necessary, since this is the soil in which the overall phenomenological argument takes root and from which it sprouts.

Dyslexics empirically tend to have stronger peripheral vision and weaker focal vision compared to the average person. This means that their visual Hyletic sense data is slightly different, and this is made coherent at the level of Passive Synthesis. Dyslexics experience a different visual “normal” (Ideas II.18), which melds with the other senses to create a unique “orthoaesthetic” (Ideas II.18c). Their peripherally-dominant eyesight also slightly affects “motivated-motivating relations” (Ideas II.18a), their visual field can become the dominant sense-perception within their orthoaesthetic, and this can mean that “associations” (APS.26) and “affectivity” (APS.31) anchor themselves in visual sense-data more than other sensations. From all this, “modes of appearance” (Ideas II.18c) may be discernably different for Dyslexic people, since their Hyletic and Passive Syntheses will have subtle differences compared to others.

All of this means that their abstract thoughts can operate in a peripherally-experienced spatial-visual mode, since their tendencies in the lower levels will *push* them in this direction at the level of

Active Constitution. To understand how this may occur, let us now turn to the relationship between Active Constitution and the lower levels it depends on.

In Ideas II, section 9-10, Husserl delineates the relationship between “categorical syntheses” and “aesthetic syntheses.” Aesthetic syntheses put together the five senses and create the unitary experience of “perception.” This is juxtaposed to “categorical synthesis”:

Let our point of departure be the distinction between *categorical* (formal and, in a certain sense, analytic) synthesis and *aesthetic* (sensuous) synthesis. We know that *objects, no matter how constituted* (objects of any region whatever, objects of any species or genus) can be *substrates for certain categorical syntheses* and can, as constitutive elements, enter into the ‘*categorical*’ formations of objects of a higher level. To the latter belongs collectives, disjunctives, and states of affairs of every kind, such as the relations between any A and any B or relations of attraction, that A is a, and the like.... (IdeasII.9)

Categorical syntheses clearly operate at the conscious level of “Active Constitution.” Husserl directly equivocates categorical syntheses with the colloquial term “thought” or “thinking,” as seen in his parenthetical note “all thinking (all operations of synthetic-categorical acts) ...” (Ideas II.10). Furthermore, categorical syntheses must be consciously and arduously processed, whereas aesthetic synthesis happens without reflection at the level of PS (Ideas II.9).

Husserl creates an extremely flexible conception of thought here. Thought does not have to operate in a certain mode or occur through a certain medium. As long as logical relations are processed consciously and actively, then we find categorical syntheses happening at the level of AC. Since a Dyslexic has a unique “normal” and orthoaesthetic which shapes many aspects of Passive Synthesis, this inevitably means that a Dyslexic will be pushed to perform categorical syntheses in a spatial-visual manner. This undoubtedly arises from the fact that *all* spatial categorical syntheses—for any person—are necessarily dependent on aesthetic syntheses (Ideas II.10). Husserl also demonstrates this when he describes mentally “grasping” an object, i.e., abstracting an object into an Objectivity, and conceptualizing it rather than perceiving it (IdeasII.10). Husserl argues that a categorical objectivity always originates from aesthetic “sensuous objectivities,” i.e., abstract spatial thought ultimately comes from, and depends on, sense-perception and its related syntheses. This is the case for everyone. Consequently, if someone’s visual field is peripherally dominant, and this single sense sphere dominates their orthoaesthetic, then this will also directly impact how they abstract spatial concepts.

Here, some characteristics of spatial-visual thought (at least for me personally) become explicable and clear. As “modes of appearance” are abstracted into mental concepts, some of their characteristics remain when abstracted at the level of Active Constitution. Notably in this case, the peripheral character of modes of appearance will remain. I think in spatial-visual terms, meaning I think in terms of whole-part mereological relations which are visualized. For instance, a larger argument—like the one made over the course of this paper—has a structure which is generated by floors (i.e., stages of an argument, or sections of the paper) which ascend. Each floor rests on and depends on the lower floors—like the structure of a building. Some arguments are unstable because a certain support pillar is too weak to support the weight of the floors which rest atop it (obviously, some conceptual analogue to gravity is operative here, and tactile thinking also plays a role). With that, I see the entire structure all at once, and can “zoom in” to sub-parts when writing out the paper in words. My mind’s eye can pan around the structure like a rotating crane-shot in a movie, to see the structure from a different vantage point—I have a mental-conceptual analogue to motivated and motivating sensations, but the object is an abstract concept rather than a physical thing. To see the entire structure all at once, it is as if the entire structure is seen, constructed, and understood in the peripheral field. To focus on any one part requires the bracketing out of the whole. The entire whole is neither clear nor distinct, however it represents a precise idea with precise sub-parts constituting it.

In Husserlian terms, I use the faculty of Phantasia to generate peripherally-experienced three-dimensional thought-shapes which portray logical relations. I inspect these thought shapes in an analogous way to “adumbrations” of a physical object (Ideas I ).

This kind of thinking can be quite associational, since one conceptual structure can easily resemble another (e.g., Plotinus’ second Hypostasis looks like a hyperbolic sheet to me, which resembles certain characteristics of Minkowskian spacetime, and so they remind me of one another, despite their lack of any conceptual connection whatsoever). Furthermore, this kind of peripheral-visual-spatial thinking seems quite different and irreducible to other modes of thought, for instance thinking in words (Reilly, forthcoming). What we find in Husserl’s analyses is that, because of my Hyletic Flow and

Passive Syntheses, this kind of peripheral-visual-thinking can intelligibly emerge as the predominant mode of categorial synthesis at the level of Active Constitution. Through phenomenology, peripheral-spatial-visual thought is intelligible and credible.

With that, this analysis is not a reductive argument wherein the Hyletic Flow simply determines the mode of categorial synthesis. The five levels of embodiment all influence and integrate with one another. This means we do not make a causal or reductive argument here, but simply explain how certain positive characteristics which many Dyslexics profess to experience are phenomenologically possible and coherent. This argument is also agnostic when it comes to neurological questions regarding the causal reasons which explain this neurodivergence.

### **Conclusion**

With the peripheral-dominance and focal-weakness which seems to inhere in all Dyslexics, we can trace how this shapes Hyletic Flow and Passive syntheses in terms of a Dyslexic body's normal, orthoaesthetic, motivated sensations, a dominant sense-medium, associations, affectivity, and the resultant modes of appearance. This all influences the aesthetic syntheses, which in turn influence how modes of appearance are abstracted and used in categorial syntheses. This process accounts for the experiences which many Dyslexics, and I, profess to experience. Thus, a Husserlian phenomenological analysis can supply a positive account of Dyslexia in terms of its tendency towards spatial-visual thinking. Consequently, Dyslexia does not necessarily require definition by negation.

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