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"The world was a confusion": Imagining Genetic Hybrids in H.G. Wells' The Island of Dr. Moreau

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But in spite of the brilliant sunlight and the green fans of the trees waving in the soothing sea-breeze, the world was a confusion, blurred with drifting black and red phantasms, until I was out of earshot of the house in the chequered wall (Wells 42).

Perhaps the most fascinating aspect of The Island of Dr. Moreau are the protagonist's experiences of encountering Moreau's animals. As Edward Prendick learns on the island, Moreau's creatures persistently defy easy definition or categorization. They are nothing more and nothing less than "hybrids" (Costa 38), or what we today might call genetic hybrids since they are animals bypassing eons of genetic evolution as they are engineered to resemble humans. The animals are not fully human although Moreau shapes most of them into resembling humans in form. Likewise, their personalities for Prendick are analogues to human ones even if the hybrids eventually return to a resemblance of their normal and natural states by the end of the novel. What is peculiar about Prendick's encounters with these beings is that each encounter reveals fundamental limitations to the imagination in at least two ways. First, Prendick's established categories for the animals transformed by Moreau are challenged throughout the novel. Second, this challenge slowly leads him to define many of the creatures as genetic hybrids. Prendick's terrible emotional reactions result from these limits to the imagination. This is because his past experiences have not prepared him mentally for his ordeal on the island. As I explain in this short essay, there are several explanations for Prendick's conceptual crisis.

Prendick's first encounter with one of Moreau's genetic hybrids takes place even before he reaches the island. Aboard the schooner that has rescued him and will take him to the island, Prendick sees M'ling for the first time. M'ling, a servant for Moreau and Montgomery, seems to Prendick to be a "nightmare" because of his "dark face with extraordinary eyes" (11). This is Prendick's initial impression. His next impression of M'ling when he sees him later on deck is of "a misshapen man" (16) and Prendick remains confused for quite some time as to who or what M'ling actually is. As Prendick tells us, "I had never beheld such a repulsive and extraordinary face before, and yet – if the contradiction is credible – I experienced at the same time an odd feeling that in some way I had already encountered exactly the features and gestures that now amazed me" (17). The contradiction is clarified shortly thereafter as Prendick admits that the face must have been the dark face that he saw upon boarding the schooner when he was in a daze.

However, as Prendick admits, the reason for forgetting such a face "passed my imagination" (17). Afterwards, he many times refers to M'ling as a "black-faced man" for he assumes that M'ling is a man possessing animal traits rather than an animal possessing human traits. What is the consequence of this? By placing M'ling in the category of the human, and thus defining him first and foremost as a man, Prendick overcomes his uncertainty about M'ling. This feeling does not last for long, however, for Prendick several pages later tells us: "The thing came at me as stark inhumanity. That black figure, with its eyes of fire, struck down through all my adult thoughts and feelings, and for a moment the forgotten horrors of childhood came back to my mind" (24). Such a strong emotional response is caused by a failure of the imagination, a failure on Prendick's part to accurately define or categorize M'ling. Whereas M'ling at first seemed to be a man to Prendick, here he seems to be a "thing" or an object that cannot be classified in any conventional sense.

Later Prendick will see M'ling differently when he identifies him as a "black-faced cripple" (30), a "misshapen monster" (42), "one of the strangest beings" he ever saw (41), and "a bear, tainted with dog and ox" (91). Prendick's descriptions here are important for a couple of reasons. First, as John Batchelor claims, "the grotesque or distorted facial expression becomes a motif in the story" (19). Second, according to Batchelor, "Details of the characters' faces are carefully noted as moral indicators; negative indicators in every case" (19). However, when revisiting Prendick's descriptions it appears that the "details" are more than just "indicators" of the personalities of the creatures. The details in fact are clues as to how Prendick's own mind works. That is, his remarks might relate more to his attempts to pin down the identity of the creatures rather than pass moral judgment on them straight away. And yet, as is the case often with Prendick, his emotional reactions to the genetic hybrids are the direct result of a conceptual crisis when facing the hybrids for the first time. For instance, when he reaches Moreau's island, he first notices "the oddness of the brown faces of men who were with Montgomery in the launch" (28) and he mentions three "strange brutish-looking fellows" as he is towed towards the shore (30). After seeing these fellows for the first time, an emotional reaction follows soon after. As Prendick states, "I saw only their faces, yet there was something in their faces – I knew not what – that gave me a queer spasm of disgust" (31). His disgust, it would seem, is almost aesthetic since he judges this odd crew to be "an amazingly ugly gang" (31). He does so because his benchmark for measurement is human rather than animal. What is revolting to him is ugliness rather than beauty even if beauty itself can escape easy definition or comprehension. By comparison then to the three "grotesque-looking creatures" (32), M'ling seems less ugly for he at least is called a "man." Eventually, however, Prendick's category of man imposes itself on these genetic hybrids for he describes them next as "three muffled men" (32) and assumes still that they are genetically modified men rather than genetically modified animals.

The challenge to Prendick's categories is relentless, for once in Moreau's headquarters he refers again to "those unaccountable men" of Moreau's and is soon thrown into despair when he asks himself: "What was wrong with them?" (37). This is only made worse when M'ling brings him a tray of food. Noticing M'ling's pointed and furry ears,

Prendick writes: the "astonishment paralyzed me" (37). This crisis of the imagination alters Prendick's emotional state and forces him to begin rethinking the identity of the genetic hybrids he has started to encounter. Therefore, when Prendick mentions an "odd leap" in his thinking (39) near the end of chapter 7, he is referring to his struggle to make sense of the hybrids, to stretch his imagination into seeing how men could be mangled into the forms Prendick has seen in his first day or two on Moreau's island. Because "men" like M'ling seem to him to be so fearfully "unnatural" (41), Prendick's nerves refuse for a very long time to settle down. Nowhere is this clearer than in chapter 9, where Prendick is confused about three creatures with "a swinish taint" because he had "never seen such bestial-looking creatures" before (46). His first encounter with the Leopard Man robs him of his "drowsy tranquility" and leaves him "greatly disturbed" (44). And as the chase with the Leopard Man begins, Prendick's fear is as much a symptom of the chase as it is of his inability to define his enemy. As he asks himself in desperation: "What on earth was he – man or animal?" (47). The problem of answering this question no doubt fuels what Prendick later calls his "disordered imagination" (49). Whereas he first saw the creature as a man "going on all fours like a beast" (44), he later reasons: "It was no animal, for it stood erect" (48). The overbearing animal traits of the hybrid, however, force Prendick to identity it as an "animal-man" (49) rather than a mananimal, which reminds us once again of the mental anguish Prendick is undergoing as he tries to fix in his mind the strange world of Moreau's that he has entered.

Why should the task be so hard for Prendick? The question about Prendick's categories may be answered by turning briefly to research findings from psychology. Perhaps the most influential research on categorization has been the research carried out by the cognitive psychologist, Eleanor Rosch. Rosch has studied at length how minds categorize objects and her taxonomy of categories, elaborated with Carolyn Mervis, is tripartite. For any given category, superordinate, basic, and subordinate levels exist within that category. For instance, in a category whose superordinate level is "furniture," at the basic level we may find "chair," and the subordinate level we will find objects like "easy chair" (Mervis and Rosch 92). Few items exist at the superordinate level and more exist at the subordinate level. Such is the way we mentally organize the world. As the category moves from the more general to the more specific when we go from superordinate to subordinate levels, more adjectives (e.g., "easy) are found so as to modify objects (e.g., "chair") when specification takes place. As Rosch and Mervis see it, "family resemblance" and "gradients of representativeness" (Mervis and Rosch 95, 99) help explain relationships between members in a category. As psychologists now believe, "prototypes" (Gibbs 296) are fundamental to those relationships. Prototypes like basic level objects may best demonstrate what the category as a whole actually is (i.e., at all three levels). Therefore, "chair" (a basic level object) probably best encapsulates our entire category of "furniture" (Rosch 34). A subordinate level object like an easy chair, then, is closer on the gradient scale to resembling the prototype than is a very different object (e.g., table). That is, "the items that have the most attributes in common with other members of their category also have fewest attributes in common with related contrast categories" (Mervis and Rosch 96). This discrimination is how categorical differences are perceived just as distinct categories are perceived by seeing similar attributes among members one class. The consequence of our ability to notice gradients of representativeness is that "some exemplars of a category are more representative than others" (Mervis and Rosch 99) and it is those examples which become categorical prototypes. How do we know this? Mervis and Rosch used a formulaic phrase to test for gradients of representativeness when measuring the speed of cognitive processing in reading experiments. The phrase they tested subjects on was the following: "An [exemplar] is a [category name]" (96; brackets in original). What their results suggest is that it is easier to grasp "A pine tree is a tree" than "A seahorse is a fish" because of gradients of representativeness and family resemblance. A pine tree may be more prototypical of the tree category than a seahorse is of the fish category, hence the quickness of processing the former and the difficulty of processing the latter.

What does this mean for Prendick? When Prendick tell us that "the world was a confusion" (42) for him after arriving on Moreau's island, he does so essentially because he cannot categorize M'ling or the three "men" who helped unload the schooner. Prendick presupposes that the creatures are vivisected men rather than vivisected animals. But as John Batchelor suggests, we know sooner than Prendick does that the beasts are not men transformed into beasts but beasts transformed into men (Batchelor 19). In chapter 7, Prendick seems to think the animals were first men but he only sees in chapter 14 that the quasi-human creatures were animals from the start. They are, as Moreau puts it, "humanized animals – triumphs of vivisection" (Wells 77) although what he means by vivisection is questionable. In general, vivisection means "the performance of surgical procedures upon living animals for purposes of research" (Dorland's 1835). However, looking up the term in the OED reveals that it was used with increasing frequency in the later half of the 19th century (OED Online), which probably correlates with the advanced development of the technique in the history of medical and scientific practice. As for Moreau, his understanding of vivisection surpasses the simple definition of merely cutting up living animals. However, this is not how Prendick understands vivisection and his confusion results from his misunderstanding.

To return to Prendick's categories, his initial attempt to come to terms with what he sees in the novel is made by conceptually extending his category of the human being. Because the male creatures outnumber the female creatures on the island, and because Prendick's initial encounters with the genetic hybrids are most often with males, Prendick's categorical prototype might be an adult human male. Against this prototype, he measures the gradients of resemblance and categorizes the genetic hybrids as "men." This implies they are human, which is how Prendick sees them for the first 14 chapters or so of the novel. To say therefore, as Richard Costa does, that "Despite semi-human appearance, they [the islanders] are unmistakably jungle creatures" (Costa 36), is to ignore Prendick's initial attempts to categorize the genetic hybrids. Likewise, when Montgomery refers to them as "curiosities" (53) and to the Leopard Man as a "bogle" (54) – that is, a specter – he does little to help Prendick reshape his categories. What is the result? As long as Prendick's categories are under tremendous conceptual pressure, his emotional state is turbulent. His conviction that the puma undergoing vivisection "was a human being in torment" (55) is one of the best instances of Prendick's profound confusion although Moreau later tells Prendick bluntly that his is a "confounded imagination" (75).

Eventually, Prendick's old categories break down in two ways. First, when Moreau informs him that the hybrids are "humanized animals" (77) and that his true task is "manmaking" (79), Prendick slowly begins thinking of the genetic hybrids as animals first and foremost. Earlier, of course, Prendick had assumed that Moreau was endlessly "animalizing these men" (65). After Moreau's explanation, Prendick tells us: "That these man-like creatures were in truth only bestial monsters, mere grotesque travesties of men, filled me with a vague uncertainty of their possibilities that was far worse than any definite fear" (87). At this point, he seems to accept the hybrids once his mind has become open enough to take in the beasts' signification. After mentally removing the hybrids from the category of the human, Prendick then distinguishes them from humans. They are victims of "Fixed Ideas [...] which absolutely bounded their imaginations" (87). In contrast, Prendick's human imagination shows somewhat more flexibility as he begins to conceptualize the creatures as genetic hybrids of a sort he has never before seen. His eye, as he puts it, eventually "became habituated to their forms" (89), which reveals his imagination to be freer than the imagination of any of the hybrids.

Second, Prendick's terms for the hybrids more or less reflect a categorical shift. A short catalogue of the Beast People that Prendick meets throughout the novel would include the following: the Hyena-Swine, the Horse-Rhinoceros, the Ape Man, the Dog Man (i.e. the Saint Bernard Dog Man), the Bear-Bull, the three Bull Men, the Leopard Man, the Satyr, the three Swine Men and the Swine Woman, the Fox-Bear Woman or Witch, two Wolf Women, a Wolf-Bear, an Ox-Boar Man, and the Sayer of the Law – a "Silvery Hairy Man" (90) and a "Hairy Grey Thing" (112) that is part "Skye terrier" and part "deer" albeit with a "hoof" akin to "claws" (66). Even though Prendick refers to some of them as "monstrosities" or things that "resemble nothing but the denizens of our wildest dreams" (98), he does think that some of them are "almost human" (98), which shows that he has begun to some extent to redefine the creatures. That is, the act of naming is comforting and signals growing mental stability. In contrast to Moreau's discomfort about the "thing" (83) he once made and then killed, and which he cannot call by any known name, Prendick's new ability to name the Beast Folk suggests they make him less uncomfortable than before. Only the puma, which seems to him to be "not human, not animal, but hellish" (107), constantly evades his capacity to define it.

As Prendick categorizes anew the Beast People, his emotional reactions lessen as his mind settles down. For example, his fear of facing the hybrids alone near the end of the novel is provoked more by what the Hyena-Swine does rather than what the Hyena-Swine is. And yet, we might ask, how is it that he makes sense of these genetic hybrids when the pigs, dogs, bears, wolves, apes, leopards and others that he sees are never really what they seem? Prendick's solution to this crisis is to begin forming what are known in cognitive science as "conceptual blends" (Fauconnier and Turner 138). Conceptual blends are products of conceptual blending or conceptual integration. For example, to speak figuratively of large expensive cars as "land yachts" is engage mentally in conceptual blending. The metaphor is based on a transformed analogy (i.e., cars are to the land as yachts are to the sea) and an analogical transformation takes place when two attributes of the yacht (namely, size and price) become attributes of the car in our conceptual blend. The nominal "compound" of two noun phrases (land and yacht) makes

of the first noun an adjective that modifies the second noun (Turner 54). Therefore, a land yacht is not really a yacht at all: it is slang for a kind of a car (e.g., a large expensive Cadillac). My point here is that conceptual blending like this is precisely what Prendick engages in as his mind takes in and transforms the genetic hybrids he observes on Moreau's island. Those hybrids become possible in the imagination because of conceptual blending. His initially sharp emotional reactions eventually wane as his ability to blend helps him overcomes the limits of his imagination. This perhaps is to be expected in a novel "dominated by the theory of evolution" (Batchelor 17) since one thing Wells is telling us here is that the human mind is adaptable to novel environments even if that adaptation takes time.

The best evidence of conceptual blending in the novel can be found in Prendick's names for the genetic hybrids. For instance, the Ape Man or the Dog Man or the Bull Men or the Swine Men are all conceptualized at some level as types of men. The adjectives that modify these names indicate what traits the men have. In this sense, Prendick has not fully relinquished his category of the human here because it still proves to be powerful in heuristic terms. Where Prendick's conceptual blends show strains are instances where the hybrid is named by a hyphenated term. That is, the difference in his mind between the Dog Man and the Hyena-Swine is a categorical one. The Dog Man would seem to him to be a kind of a man whereas the other creature seems to be equally a hyena and a swine. In short, what the hyphenated terms suggest is that the conceptual blend for certain characters has not been fully formed in Prendick's mind. If the opposite were true, then we would expect different names from those that he uses. Having said that, because the hybrids are indeed hybrids and are very different from each other, no simple name can really apply to them accurately. Prendick near the end of the novel knows this when he says that "Moreau had blended this with animal with that" (134) in his experiments. But if certain traits did seem more dominant than others in a given genetic hybrid, then we would expect Prendick to use more precise names than "Wolf-Bear," for example, in his descriptions. Some of this confusion no doubt comes back to haunt Prendick after he reaches home.

Upon returning to England, Prendick is deeply troubled. This is because man's "animal nature will never escape his memory" (Costa 39) for he finds in the faces that he meets on the street much of what he saw in the faces of the hybrids on the island. As Costa writes of Prendick, "The island assumes its allegorical identity in his mind; it is the world where the brute in man is covered by the flimsiest of façades" (39). What Costa means here is that to divide the organic world into only two kingdoms (i.e., plant and animal) is to be forced into categorizing humans as animals. That Prendick's pessimism about man at the end of the novel reveals this pigeonhole is therefore not at all surprising. Additionally, the "façades" Costa refers to here might very well be the names for the hybrids that Prendick gives them in the novel. If naming is a form of categorizing, a form of knowing as it were, then Prendick's labeling acts are all about understanding what or who the genetic hybrids on the island are. However, as Costa senses, those names might be dishonest and ultimately fail to serve their epistemological purposes. But Prendick is not alone in his attempt to adapt his imagination to the world he experiences. As Batchelor notes, "Prendick's close attentiveness to physiognomy is a requirement of the

narrative method, since the reader collaborates with him in interpreting the nightmare appearance of the creatures on the island" (19). By collaboration, what Batchelor probably means to say is that like Prendick we too run our own conceptual blends when trying to come to terms with the genetic hybrids that Prendick – and finally Wells – describes for us throughout the novel. The extent to which some of the names fit while others do not fuels Prendick's violent emotional reactions to the creatures. Should they have proven easy to name, define, and know, the terrific psychological tension in the novel would be halved to say the very least. This is no doubt what the Turning Point Project's 11 October 1999 advertisement about genetic engineering in section 'A' of The New York Times recognized when it mentioned "Dr. Moreau's menagerie." The kinds of genetic hybrids that Wells imagined over a hundred years ago are only now being realized by biotech scientists, proving once again how much ahead of his time H.G. Wells really was by putting hard questions to our established categories and definitions.

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