Honors Thesis Proposal

for

Colonial Ideology and the Ambivalence of Science Fiction Literature

Graham Hall

James Campbell, Ph.D.
Thesis Committee Chair
Department of English

Patrick D. Murphy, Ph.D.
Committee Member from Major
Department of English

Bruce B. Janz, Ph.D.
Committee Member outside Major
Department of Philosophy

Cecilia Rodríguez Milanes, Ph.D.
HIM Coordinator
Department of English

Kelly Astro, M.S. Ed.
Director of Research & Civic Engagement
The Burnett Honors College
I. The Origins of Ambivalence

Science fiction literature has engaged themes of colonialism consistently throughout its history, continuing to do so in an increasingly modified fashion as the genre participates in an increasingly broader field of literary production. Despite its effectiveness as a tool of social critique, the genre has historically found itself constantly approaching colonialism and neocolonialism in a manner which seems to simultaneously undermine and reassert the logic of colonialism. This tension characterizes what I hope to outline as an ambivalent function of the genre. This thesis will examine a perceived ambivalence in the genre of sf in regards to colonial ideology, to assert a theoretical origin of this ambivalence, to focus on the presence of this ambivalence in mid-century/New Wave sf, to measure this ambivalence in the context of an evolution in social discourse arising during the mid 20th century in the United States, and to discuss the response of this ambivalence to modern self-consciously "postcolonial" incursions into the genre. This proposal will serve to outline the progress made in my examination thus far, as well as to assist in establishing the direction of further necessary research.

John Rieder contends that "emergent English-language science fiction articulates the distribution of knowledge and power at a certain moment of colonialism's history" (Colonialism 3) and that as a result, "much early science fiction seems merely to transpose and revivify colonial ideologies" (4). This period would contribute substantially to the development of the series of repetitions and "network of resemblances" (Kincaid 47) which would constitute sf as a genre, including the development of the science fictional plot elements of invasion, exploration/appropriation, technological advancement/progress, catastrophe/anxiety, and alien contact/anthropological difference, among numerous others. I contend that these elements function within the genre in such a way as to inform the ideological position of texts operating
within the genre. As a result, I would contend that sf, as a megatext reflexively in dialogue with itself, has inherited a colonial character: an entrenched set of colonial ideologies which occasionally manifest themselves overtly, but more often through more subtle means.

The idea of an sf megatext, a "large and mutable body of references [...] consider[ed] to be the shared subcultural thesaurus of the genre" (Csicsery-Ronay Jr. "Empire" 362), implies that sf texts share a certain set of background features and assumptions, assumptions which have their origins in an emergent sf plagued by colonial ideologies and later perpetuated by space-opera's desire to colonize outer space after Western civilization ran out of white spaces on the map (Rieder, Colonialism 37). As a result, sf has inherited a general colonial character, a set of embedded colonial ideologies which arise differently in the texture of different sf works. The purpose of this paper will be in part to analyze the presence of these ideologies in mid-century and New Wave sf, as well as the way these ideologies function in relation to contemporary social discourse and neocolonial ideologies.

The ambivalent character of the genre arises when the colonial character of sf comes into tension with the critical function of the genre as "the literature of cognitive estrangement" ("Estrangement" 24), as understood by Darko Suvin. Suvin's understanding of sf is one which treats sf as both a mirror and a crucible (25). That is, it treats science fictional stories as having one foot in the author's empirical reality and one foot in an "other" reality, so that while constantly alluding to reality, sf simultaneously forces the reader to feel estranged from it, and in becoming estranged to achieve a critical gaze. The "crucible" function of sf, which Suvin proposes, implies that sf functions as a way for society to reflect on itself. This tendency of the genre to force society to reassess itself in "the hope of finding in the unknown an ideal environment" (25) further illustrates its socially critical function. The features of this process of
allusion, Suvin outlines leads sf to compulsively project the social reality from which the text emerges onto any "other" reality within the text. It is this constant recognition of the self in an "other" reality within sf that more often than not achieves the narcissistic end of peopling the known universe with humanity (and a familiar humanity at that), figuratively and/or literally. It is this very kind of ethnocentric projection of the social reality of the self culture onto the "other" culture that Abdul R. JanMohamed discusses in his analysis of "imaginary" and "symbolic" texts within colonialist fiction (64-67); adapting his discussion to an analysis of sf could prove very fruitful.

When referring to "colonial ideologies" in this thesis I am referring to the collection of illusions which work together to justify and perpetuate the antagonistic expansion of a particular mode of production on a global scale.¹ Those that Rieder identifies as "looming through the mists" (Colonialism 13) of emergent sf and which, continue to loom through the mists of sf well into the mid 20th century, include but are not limited to: racial ideology, or the attribution of essentialist biological characteristics to a socially constructed categorization of difference; the ideology of progress; "the anachronistic structure of anthropological difference" (26) which Rieder associates with the ideology of progress and ascribes to an anachronistic framing of first encounters between the European and the native; Social Darwinism, or the collection of beliefs that ascribe social competition to social progress; "the missionary fantasy" that the colonizer is fulfilling the needs of the native rather than the other way around; an "empty land" principle which holds that if a land is not being used in accordance with the logic of a particular mode of production then it can be ethically co-opted; and the capitalist ideology of infinite abundance which drives hollow earth and space-exploration fantasies (37). A more extensive mapping out

¹ While the rise of capitalism may have proven particularly conducive to European colonialism during its apex, it is worth noting that neither colonialism as a practice nor the ideologies which justify it are contingent on one mode of production.
of these ideologies and the way they tend to be carried by the megatext in shared plot elements and assumptions will be necessary for my thesis; this will require more time and space than is permitted in this proposal. In addition to asserting an entrenched ideological position of the genre in tension with its critical function, I will also need to briefly map out in this section the social context and ideological forces at play during this period, including the McCarthyism of the fifties, the civil rights struggle of the sixties, Cold War anxieties, and the broader neocolonial struggle for hegemony that the Cold War represented (brought to a head indirectly in Latin America and Southeast Asia).

I will divide my thesis into four sections: the first covering an introduction, the theoretical origins of the genre's ambivalence, and an outline of the social context the body of the thesis will also be addressing; the second will assess the manner by which the genre's estranging function undermines overt ideological dissemination; the third will address the ideologies embedded within ostensibly "anti-colonial" sf; and the fourth and final section will conclude the thesis after addressing current efforts at reorienting the genre as "postcolonial" in concert with a Western academic practice rather than in light of a pronounced potential for ideological and material decolonization within the genre.

II. The Mirror Confounds Propaganda

I plan on opening up this section with a presentation of texts being discussed (including Starship Troopers, and likely the work of other members of the Campbell camp; perhaps L. Ron Hubbard's Return to Tomorrow) and a brief outline of their ideological presentation to establish them as overtly colonialist texts. The ultimate goal, however, is to undermine this categorization by examining the intrinsically critical function of the work. I will establish a "linchpin" text to

---

2 I will need to establish a principle for this heuristic division between "pro-colonial" and "anti-colonial" texts. I have a potential but as of yet undeveloped theoretical underpinning which adapts Abdul R. JanMohamed's division of colonialist fiction into "imaginary" and "symbolic" texts.
structure each discussion; that is, a seminal text of primary focus around which the discussion will revolve, and then incorporate other texts to evidence a generic trend. I anticipate that this structure will limit repetition and allow for the incorporation of more texts than if I were to discuss texts in isolation. It is also a structure that reflects a central tenet of my thesis; that is, that each of these texts is informed by a certain intertextual character of the sf megatext. I will also likely trace this tradition back to Kipling, as Heinlein acknowledged a debt to Kipling's writing and his work straddles both sf and colonialist fiction (Hartwell 285). Kipling's own colonialist fiction seems to share this kind of ambivalence, exhibiting overt colonialist presumptions yet attempting some element of sympathy toward the colonized, a la "The White Man's Burden." In fact, Starship Troopers quotes a piece of wisdom from Kipling, a poetic excerpt that implies its main character is better for having received a daily kicking (quoted in Heinlein 79).

I propose that as a feature of sf as a genre, works tend to be overtly critical, with "ideology looming through the mists" (Rieder, Colonialism 13). With that in mind, part of my thesis contends that even those works which are overtly propagandistic tend to undermine themselves through the process of cognitive estrangement. I will examine Starship Troopers as a seminal Heinlein work (it will possibly function as my "linchpin text" for this section) which has egregiously colonial overtones which emerge as an attempt at hard-right nationalist propaganda. My ultimate thesis will be that the critical function of sf at times undermines the text's overt ideological position by first providing a critical distance from which to view these positions (in the case of Heinlein often leading to an unintentional self satire), and second by contradicting ideology as a result of the necessity of allusion, a complication of projecting reality into an "other" reality.
As a brief outline of the overt ideological position of Starship Troopers I will have to discuss the presence in the text of what M. Keith Booker observes as "a pseudo-Darwinian vision of life as a struggle for survival of the strongest, thereby urging Americans to seek greater military strength so that they can survive" (178). This Social Darwinian vision is underlined by a general advocating of capital punishment and violence to maintain civilization, a fear of social decay without the enforcement of violence (Heinlein 92-95), a general position that might makes right (24), and an extreme patriotism which borders on self satire in its exaggerated sentimentality; this can be seen in statements like "The noblest fate that a man can endure is to place his own mortal body between his loved home and war's desolation" (74) or "The price demanded for the most precious of all things in life is life itself" (76), the absurdity of which seems even more pronounced with the backdrop of an interstellar war against giant bugs.

As a highly polemical text reacting against the threat which communism poses to American neocolonialism, the novel often gets tangled up in the act of transposing this ideological conflict onto an other reality, a necessity of the genre which I will assert is not conducive to overt ideological dissemination. The "other" reality setting demands that the text indulge in extended diatribes to clarify adequately the ideological position being taken and its allusion to reality. This works against overt efforts to encourage the colonial ideologies manifest in mid-century American neocolonialism by laying bare for the reader the strategies of hegemony, the techniques of violence and control (52), and the absurdity of blind nationalism implicit in these ideologies. In placing these in detail in an "other" reality they are made far more vulnerable for analysis and critique as they are partially removed from the reader's ideological presumptions about their own culture. The effect is much different from that of a realist war story wherein the reader inhabits the ideological position of his own culture with greater ease.
Here Western culture exists within the story, but the association is indirect, allowing the reader to engage the ideological positions in the text less hindered by bias.

The second effect of estrangement, the contradictions facilitated by the necessity of transposing ideology into an "other" reality, becomes evident in the egregious misunderstanding of Marxist theory expounded upon in Chapter 6. Here the text addresses "the magnificent fraud of communism" and "the Marxian theory of value" (75) only to make its misunderstanding evident by then outlining one of the very principles of Marxism itself as a sort of ideological counterpoint to Marxism. I contend here that while the misunderstanding of Marxism is not a function of the genre, the contradiction the text presents here is facilitated by the genre's feature of estrangement. The text again becomes confused in its desire to condemn the "pre-scientific pseudo-psychological nonsense" (93) of a contemporary psychology which discouraged corporal punishment, by referencing Proverbs 22:6, a text decidedly "pre-scientific." These contradictions and confusions are prevalent throughout the text and bear further examination.

My assertion is that these are more than simple misunderstandings (though they are certainly that); they are contradictions and confusions facilitated by the necessity of allusion to reality that one does not find in realist fiction. The inability to refer directly to reality leads the text to establish an allusion to Western society which is easily critically undermined and vulnerable to ideological contradiction and confusion. Certainly the text is socially critical rather often in a manner that reinforces colonial ideology, but my contention is that the critical function of the text fails to discriminate at moments, thereby undermining the ideologies which it would otherwise perpetuate. It will be my goal to examine the way sf tends to shed light on this effect of estrangement in other texts such as Pat Frank's _Alas, Babylon_, and Heinlein's _The Moon is a Harsh Mistress._
III. Still "Looming Through the Mists"

I plan on opening up this section, like the last, with a presentation of texts being discussed and a brief outline of their critical function to establish them as ostensibly anti-colonial texts. I ultimately hope to undermine this categorization by examining latent colonial ideologies embedded in the text. My contention will likely be that sf tends to be a poor tool of overt propaganda and tends to function in a manner overtly critical of the reality and society from which it emanates. This tendency can be traced to the early satirical work of Cyrano de Bergerac and Jonathan Swift all the way back to Lucian's *True History*. The structuring of the discussion will be similar to the previous section; however, if I am able to effectively incorporate the theoretical division of the "imaginary text" and "symbolic text" I will likely focus here on how these texts attempt to escape from the tendency toward producing "imaginary texts" in sf. I will also likely trace this tradition to H.G. Wells, whose *The War of the Worlds* is overtly critical of colonialism but plagued by an underlying Social Darwinist ideology.

I will organize this section around the linchpin of Le Guin's seminal New Wave sf novel *The Dispossessed*, first discussing the critical potential of the novel. The vision the text presents of a cooperative alternative in anarcho-syndicalism, a third option to break up the seemingly intractable dichotomy between libertarian capitalism and authoritarian socialism in our own world, serves an obvious and effective socially critical function. It provides an alternative to the two social models which insist on participating in a neo-colonial struggle for world hegemony. What's more, the dialogical manner by which the text presents this third option is particularly conducive to reader reception (at the same time, it engenders the text with a sort of ambivalence, or as the subtitle prefers, "ambiguity"). The social critical function of this novel has been well established in literary scholarship, so much so that I will only need to provide a brief outline to
assert that this text can function as the linchpin of my heuristic division "anti-colonial"; that is to say, it is perceived as an "anti-colonial" work. It is my intention, however, to examine the features which may undermine this categorization.

Borrowing the terminology of the sf anthology *Human and Other Beings*, I would point out that there are no "other" beings in this text, literally and figuratively. This underlines the "imaginary" tendency of sf to people the universe with an ethnocentric vision of humanity, a tendency which I hope to connect to the present colonial ideologies within the text. While considering the novel's critical function I will ultimately contend that the plot of the novel is one of an attempted "colonization in reverse" by the protagonist, Shevek. It is perhaps more appropriately understood as a neo-colonization in reverse, if you will, a fact which reflects the social context the story is addressing, namely the struggle for global hegemony between the United States and the USSR. It is not frequently mentioned in the novel that "the Free World of Anarres was a mining colony of Urras" (Le Guin 82), but the limited economic relationship between the two planets, in which Urras exploits the resources of Anarres through threat of force, provides an origin for the implicit Urrasti oppression still felt by the Anarresti all these years after their supposed isolation. It is in this context that Shevek makes his attempted incursion on Urrasti society.

This hypothesis requires clarification, as the site upon which Shevek attempts to make his incursion within the novel, Urras, is a world very much like our own during the 1970s. There is in fact a very straightforward representation of our own Cold War which I will have to examine more in depth. However, it is not a direct analogy to reality which obtains in the text, but the logic of colonialism endemic to the Western culture from which the text arises. Shevek's overtly stated purpose varies before leaving for Urras, but one constant feature is an implicit (and stated)
desire to "subvert the archists" (332). Subversion alone does not make a colonialist, however, so it is important here to examine the motivation behind his subversion and the ideology which justifies it. Here it will become clear that while the novel does attempt to make its own ideological incursions into our world, it fails to escape its own ideological presumptions; as Althusser would say, "ideology has no outside" (175) in this instance.

My hypothesis hinges on the common contention, expressed by Abdul R. JanMohamed, that colonialism is an activity in which "the covert purpose is to exploit [a] colony's natural resources [while] the overt aim [...] is to 'civilize' the savage, to introduce him to all the benefits of Western cultures" (62), or in the case of Shevek, Anarresti culture. This is not to imply that Anarresti culture is the allegorical representation of Western culture within the novel (this honor seems to fall thinly veiled on A-Io), I simply mean that it is the overt aim of Shevek in the novel to bring the merits of Odonianism to Urras (noble though they may seem, the text spends plenty of time second guessing and undermining the principles of Odonianism). Shevek's covert purpose, however, is revealed in his countless descriptions of Anarres as a "meager" (58), "barren" (58, 69), and "imimical" (104) land, his continual insistence on the inadequacy of Anarresti resources, and the elaboration of his desire for Urrasti resources, his "birthright" (69). It also emerges in the anxiety Shevek exhibits over not deserving the land of Urras once there.

It is important to mention that the inadequacy of resources which fuels Shevek's desire to utilize the resources of Urras is measured by an ideology of progress. Anarres lives primarily on a subsistence economy; however, when resources fall shorter and shorter, the definition of "necessary production" often comes into question. Necessary production ultimately proves to be determined by an ideology of progress that is apparent in Sabul's attempts to maintain a technoscientific pace with Urras; to avoid the "provincialism" (101) of which he is accused, and
in Shevek's mentioning of Anarresti society's unwillingness to "regress" from a technoscientific paradigm; to return to a "pre-urban, pre-technological tribalism" (85). While it is framed as an inadequacy of the Anarresti economy, the ideology of progress based in a Western technoscientific paradigm is what actually forces the Anarresti to compromise the principles of their subsistence economy and Odonian ideology (82). This ideology of progress is accompanied in the text by the associated ideological position within Social Darwinist ideology, namely that competition for survival breeds social progress by weeding out the less socially fit within a species (64, 73). This is the very same Social Darwinist ideology present in The War of the Worlds that partially justifies the Martian colonial enterprise as a necessity of survival (Rieder, Colonialism). Also present is the ideology of empty land; it is an adaptation, or really a more honest version of the principle (that used in North America to remove natives from their land) that if a land isn't being used in the proper manner, then it is ethical to take it.

An ideological technique which characterizes Shevek's attempted manipulation of Urrasti society is the anthropologist's gaze. This is the manner in which Shevek encounters Urras, treating the planet as an object of analysis, stuck in time where the Anarresti left it. This is exemplified by the sentiment of anachronism which Shevek expresses to Pae in the statement "You are our history. We are perhaps your future" (66-67) as well as in numerous other instances (79, 265). I do not mean to suggest by any of this that Shevek, a character doubly displaced, somehow achieves something on par with the crimes of European colonialism or American neocolonialism or that the plot of The Dispossessed reflects this. I posit that rather it shares a symmetry; an underlying logic of colonization. I want to consider that as a text, The Dispossessed participates in a genre - a particular shared set of resemblances and assumptions -
that insists on perpetuating a number of colonial ideologies, a participation which undermines its ostensibly "anti-colonial" position.

Within this broader discussion I hope to incorporate a discussion on identity as difference and the attempted undermining of racial ideologies in William Tenn's "Down Among the Dead Men," as well as the presence of colonial ideologies and native resistance embedded in the effort to undermine racial ideology in Leigh Brackett's "All the Colors of the Rainbow." Clifford Simak's "Desertion" is another example of an effective effort at contemplating alterity that is struck by a colonial premise that it falls short of addressing; that is the very fact that the protagonist's presence on Jupiter is a part of a larger effort of interplanetary colonization and exploitation of resources. The native population and the implications of this colonization is noticeably absent from the text; the question that goes unasked throughout the story is "why is the protagonist trying to exploit the resources of a planet which has a sentient indigenous population he knows little about?" Samuel R. Delaney's *Babel-17* will also potentially prove worth examining as a metonymic exploration of the role hegemonic discourse plays in subject formation, measured in the context of the black diaspora and the civil rights efforts of the 1960's, its critical achievement undermined by the space-opera spectacle of its plot.

IV. Wouldn't it be nice... if sf were postcolonial?

As sf begins to participate in a broader intertextual dialogue, there is an increasing presence of work within the genre which not only takes an ideological position against colonialism, but attempts to actively dismantle its ideologies. What seems apparent is that there has been a concerted effort in the Western academic world during recent years to market and analyze sf as postcolonial, an effort which seems in concert with a more general trend within Western academia toward emphasizing postcolonial studies. There have been an increasing
number of publications in this vein during recent years, either translations of previously published sf from postcolonial nations or new work in 'english' (Ashcroft, et al.) from postcolonial nations (the *Dark Matter* anthologies [2000, 2005], *Cosmo's Latinos* [2003], *So Long Been Dreaming: Postcolonial Science Fiction & Fantasy* [2004], etc.) as well as an increase in academic discourse regarding sf in any language which can be examined in the context of postcolonial theory (*Science Fiction, Imperialism and the Third World: Essays on Postcolonial Literature and Film* [2010], *The Postnational Fantasy: Essays on Postcolonialism, Cosmopolitics and Science Fiction* [2011], *Postcolonialism and Science Fiction* [2012]; some with more visibility than others [io9 covered the latter in an article]), all of which have been framed by an investigation of the postcolonial potential of sf as a genre. Simply put, "science fiction" and "postcolonial" have been appearing side by side with increasing frequency; I will argue that this phenomenon is not because of any receptiveness on the part of the genre, but rather in spite of a lack of it. My purpose in this section will be to examine the way this trend exhibits a concerted effort to reorient the genre in the context of modern academic discourse, to essentially reframe sf as a genre. I will contend that the tendencies of the repetition of a "network of resemblances" (Kincaid 47) which has constituted sf up to this point is resistant to these attempts; that the way sf functions as a genre reinforces the logic of colonialism. With that in mind I will conclude my paper with a discussion on the way these incursions may force sf to adapt as a genre, to take on new characteristics, and eventually maybe even become tendentially postcolonial.

I will focus the brunt of this examination on Jessica Langer's *Postcolonialism and Science Fiction* as it seems to have garnered the widest dissemination of the critical texts and underlines a general sentiment present many of them. This text seems informed by a constrained effort to
find postcolonial tendencies within sf, as though formed by a sociogenesis in the sentiment "wouldn't it be nice if sf were postcolonial?" I will also no doubt want to draw attention to a fetishization in the text of what the author terms "Bhabhaian" references or undertones (usually so thickly disguised or obliquely signified in the analyzed text as to be indistinguishable, nonexistent even) which certainly speaks to this sentiment. The oft repeated proposition that one feature or another of whichever sf text she is discussing "may be a nod to [a] Bhabhaian concept" (emphasis mine) (Langer 52) seems to underline a permeating social desire to find the postcolonial in sf (and a more general fetishization of postcolonial studies in academia). This fetishization is further emphasized by the author's flagrant misinterpretations of "Bhabhaian" concepts; the text fails to cite most of the references to Homi K. Bhabha and seems to be laboring under the misconception that any kind of ambivalence in a text signifies Bhabha's conception of the ambivalent function of colonial discourse (the same goes for the concepts of "slippage," "hybridity" and "mimicry").

Langer's primary thesis, which she "maintain[s] throughout this book," is that "SF is not an inherently imperialist discourse or writing practice; rather, it has been adopted for imperialist and racist ends" (45). Attempting to understand sf as a discourse that is either inherently imperialistic or inherently a tabula rasa co-opted by the individual author or society at one moment in history fails to understand how sf functions as a genre. Sf is a writing practice/reading strategy constituted by the way it has been and is being adopted and perpetuated by society. The flaws in Langer's analysis become apparent if I consider just one feature of the history of the genre, specifically that of the space-opera tradition. Rieder contends (rather persuasively) that the space-opera tradition was born out of a Western desire to colonize outer space, having run out of white spaces on the map, and is therefore engrained with the logic of colonialism (Rieder
Colonialism 37). By placing their worlds in far flung extraterrestrial settings, the sf works Langer analyzes (regardless of how self consciously postcolonial they may be) are often participating in the shared assumptions of the megatext and the jargon and context of the space-opera tradition in particular. In such a way these texts often presuppose the means and right to occupy whatever extraterrestrial setting they occupy in a manner which reinforces the logic of colonialism through association. My assertion is that it is not so easy to divorce an individual sf work from the history of the genre and the shared assumptions of the megatext. In light of this I would still argue that sf is a genre characterized by an ambivalence in regard to colonial ideologies, but as "generic identity is always generic difference also" (Rieder, Colonialism 18) I must be careful not to contend more than that this is a genre which tendentially reproduces colonial ideology in tension with a critical function that tendentially undermines it.

Far from attempting to imply an opposition to granting a voice within literary discourses to marginalized populations, the purpose of this section is rather to examine a trend within Western academic discourses which reflects an attempt to reorient the genre often at the cost of isolating postcolonial incursions - like the aforementioned anthologies - from the generic tradition to which they belong. I also potentially intend to examine briefly (as briefly as possible) the differences between the way the sf canon is currently constructed, contrasted against the way it was constructed thirty or more years ago by examining the differences between widely disseminated anthologies during these respective periods, in an effort to assess another potential front of this reorientation (if space permits). I will likely conclude with the prediction that as more and more self-consciously postcolonial works enter the canon and inform the megatext, the genre will likely evolve to receive them more readily.
Works Consulted


Booker, M. Keith. "Science Fiction and the Cold War." *Seed* 171-84.


Foucault, Michel. "What is an Author?" Rabinow 101-20.


Simak, Clifford D. "Desertion." Evans, Csicsery-Ronay Jr., et al. 177-88.


Tenn, William. "Down Among the Dead Men." DeGraeff 191-216.

Tenn, William. "The Liberation of Earth." Evans, Csicsery-Ronay Jr., et al. 266-82.