GENERIC CUES AND GENERIC FEATURES IN ARABIC SCIENCE FICTION:
THE NOVELS OF KASSEM KASSEM

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GENERIC CUES AND GENERIC FEATURES IN ARABIC SCIENCE FICTION: 
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ABSTRACT

Is Arabic science fiction similar to the kind of science fiction with which a reader of English-language science fiction, a watcher of English-language science fiction films, or viewer of English-language science fiction television programs is familiar, or is Arabic science fiction something else entirely? This dissertation constructs a model of the science fiction genre as it has evolved in the English language using prototype theory and the three structural dimensions of genre proposed by John Frow in *Genre* (2005): formal organization, thematic content, and rhetorical structure. Formal organization includes the use of deixis and pulpstyle features; thematic content addresses the iconography of science fiction, including the icons of the spaceship, the alien, the transformed human, and the robot; and rhetorical structure includes the four features of alternativity, plausibility, extrapolation, and a relationship to science. Five Arabic-language novels that identify themselves as science fiction are chosen for examination based on paratextual criteria: *al-riḥla* (1991), *la’anat al-ghuyūm* (1993), ḥadatha an ra’ā (1995), *lamasat al-ḍaw’* (2001), and *jasad ḥārr* (2004). The model of the science fiction genre is used to examine these five novels, written by Kassem Kassem, a Lebanese author. It is determined that each of the five novels exhibits features of prototypical science fiction. The implications of the presence of these features for science fiction studies and avenues for further research are discussed.
I would like to extend my sincere gratitude to the following people:

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Transliteration System

The transliteration system used in this dissertation is that of the *International Journal of Middle East Studies* with the following changes:

1. The *alif maqsūra* (١) is rendered á.
2. When two Roman letters are used to transliterate a single Arabic letter, such as sh for ُش, the two letters are underlined: *shams* شمس.
3. Proper names have been capitalized in transliteration, but titles of works have not been capitalized.
4. When inseparable prepositions, conjunctions, and other prefixes are followed by *al*, the *a* will not elide: *bi-al-khayāl* بالخيال.

Citation and Style System

1. Introduction

Science fiction written outside the United States and the United Kingdom, especially science fiction written in languages other than English, holds a distinctly peripheral position in the Anglophone science fiction studies community. Consequently, scholarship on such science fiction has been fitful. While one can expect an entire edited volume on non-Anglo-American science fiction to appear occasionally, and similarly expect Science Fiction Studies to devote an entire issue to a particular country or region periodically, this is perhaps the extent of it. This sporadic and haphazard focus on science fiction outside the Anglo-American milieu has resulted in “troubling lacunae,” to borrow the phrase Csicsery-Ronay (1999b: 482) uses to describe the result of a similar pattern in the publication of science fiction translations into English.

This lack of attention is not evenly spread. Instead, there is a hierarchy of attention paid to science fiction from outside the United States and United Kingdom. After science fiction from the Anglo-American sphere, works from the English-speaking Commonwealth countries, especially Australia, receive the most attention, partly because of the excellent scholars who hail from these countries. The next tier of attention is

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1 Science fiction from outside the United States and United Kingdom is sometimes termed “global science fiction,” but this term has two flaws. First, it is ambiguous. In an introductory essay to two issues of Science Fiction Studies on “global sf,” Csicsery-Ronay (1999a) distinguishes “global” science fiction from “international” science fiction, the former being the result of globalization and the spread of U.S. pop culture, and the latter denoting science fiction from particular regional or national contexts other than the Anglo-American one. Ferreira (2011), however, uses "global" instead of “international,” suggesting they are somewhat synonymous terms with differing connotations. Second, the term global science fiction is misleading. Ferreira (2011) prefers the term “global” to “international” when speaking of science fiction “to underline the inclusive scope of the genre” (255n1), yet the term generally seems to be used only when specifically excluding the dominant type. Anglo-American science fiction, much as the term “world music” is used when speaking of music other than the dominant genres of music from Europe and the United States.
occupied by science fiction from Russia, France, and Japan. Finally, science fiction from the rest of the world receives the least attention.

One can find an example of this peripheral status in the recent *A companion to science fiction* (Seed 2005). Most of the volume is devoted to U.S. and U.K. writers and writing. Part V, “the international scene,” that is, the whole of science fiction outside the United States and the United Kingdom, is represented by three chapters on Canadian, Australian, and “Japanese and Asian” science fiction respectively. Of these three chapters, science fiction in languages other than English is addressed fully only in the third, though the chapter on Canada affords French-Canadian science fiction two-thirds of one page.

This hierarchy of attention seems to have at least three causes. First, as Lundwall (1977) points out, most native speakers of English in the United States and the United Kingdom are monolingual, or at least less multilingual than their counterparts outside those two countries. As science fiction scholarship in English is written primarily by these native speakers of English, their scholarship inevitably leans toward the sources they are able to read. Second, scholars of science fiction reside predominantly in the English departments of their universities, even outside the United States and the United Kingdom. For example, Domna Pastourmatzi, a Greek scholar of science fiction (including Greek science fiction), is a professor in the English department of the Aristotle University of Thessaloniki. She writes that such a pattern is common throughout Europe among science fiction scholars, but most do not make the effort that she has made to include local science fiction in their studies, concentrating instead on English-language
science fiction (Pastourmatzi 2004). Finally, many scholars perceive science fiction to be a fundamentally U.S.-U.K. creative venture. Freedman’s position probably represents that of many scholars of science fiction:

As should be fairly evident by now, science fiction is for me primarily an Anglo-American phenomenon, and in a more minor way a French one. This amounts to a confession that the important Russian and East European traditions lie--to a considerable extent and above all linguistically--outside my professional competence, and are consequently underrepresented in the current study. (Freedman 2000: 95-96)

While the limitations that Freedman (2000) admits are understandable, the lack of scholarship and attention that those limitations engender do a disservice to the science fiction studies community around the world. English, as the international language of scholarship, is the gateway for many scholars outside of the English-speaking world to regional science fiction that would otherwise remain inaccessible (Pastourmatzi 2004). Without studies in English, many areas of the science fiction community’s map of the world remain *terra incognita*.

Recent English-language scholarship on science fiction in languages other than English has begun to address these deficiencies, and this scholarship has been of excellent quality. Science fiction from Latin America, for example, has been examined in Lockhart 2004, Ginway 2004 and 2005, Molina-Gavilán, et al. 2007, Zapata 2010, and Ferreira 2011. Similarly, Pastourmatzi has singlehandedly provided the English-reading world a window into science fiction, science fiction criticism, and science fiction

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2 Some limit science fiction's nature even further: “American science fiction is the base line against which all the other fantastic literatures in languages other than English must be measured” (Gunn 2010: 27).

Still, some areas remain sorely understudied. For example, China has 20% of the world’s population and more than 154,000 books published annually (McGowan 2003), yet only four scholarly works have been written in English on China’s science fiction in the last 20 years: Wu 1994, Huss 2000, Lu 2002, and Tatsumi 2005.

Arabic science fiction finds itself in a comparable situation. In the English language, very few studies have appeared on Arabic science fiction. One can find three entries in the *Encyclopedia of science fiction* (1995): one 700-word entry on Arabic science fiction generally (Olša 1995a); one 200-word entry on the earliest of the modern writers of science fiction, Tawfīq al-Ḥakīm (Olša 1995b); and one 120-word entry on the second modern writer of Arabic science fiction, Mustafá Maḥmūd (Olša 1995c). Other than these encyclopedia entries, there is a one-page article surveying Arabic science fiction from the Gulf states (Olša 2001); a one-paragraph analysis in a book on theories of Arabic literature (Snir 2001); and, most importantly, two full length scholarly articles that try to place Arabic science fiction in a theoretical context (Snir 2000, 2002). While this seems at first to be somewhat more attention than Chinese science fiction has received, the total number of words or pages is actually smaller.

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3 By “Arabic science fiction,” I mean science fiction written in the Arabic language. I do not use “Arabic” as a synonym for “Arab,” though Arabic science fiction is largely written by authors who are from the Arab world and who probably include “Arab” as part of their identities.

4 I was unable to obtain Snir 2002, but Snir informs me in an electronic mail message (23 April 2008) that the information it contains is substantially the same as Snir 2000.
In this dissertation, my goal is to contribute to this small collection of scholarship. In doing so, I hope to improve the situations of both Arabic science fiction scholarship specifically and the study of science fiction in languages other than English generally, goals I discuss further in chapter nine. To achieve these goals, I construct a model of the science fiction genre in English, then use that model to examine a single author’s Arabic works. In doing so, I establish a connection between science fiction in English and science fiction in Arabic. I begin with a basic question suggested by the one work in English of significant theoretical depth on Arabic science fiction, Snir 2000.

1.1. The Structure of this Dissertation

One of the few scholars to write in English about Arabic science fiction, Reuven Snir, suggests that science fiction as that term is used in Arabic is not necessarily synonymous with “science fiction” as the term is understood in English: “It seems that science fiction is not always clearly defined and scholars sometimes confuse it with fantasy” (Snir 2001: 39n181). In an earlier work on Arabic science fiction, Snir cites a number of “critics [who] confuse it [i.e., science fiction] with fantasy...” (2000: 267), including Qāsim (1993), Rāghib (1981), ‘Azzām (1994), and Bahī (1994) (Snir 2000: 267n24). While Snir (2000) acknowledges that even the authors of the authoritative Encyclopedia of science fiction (1993) do not believe science fiction and fantasy can be fully separated from one another, this is substantially different from “confusing” the two genres.
Snir’s analysis suggests a problem, one of definition and usage. If science fiction as it is understood in the Arabic-language science fiction discourse community is something different from science fiction as it is understood in the English-language science fiction discourse community, then any kind of analysis that assumes one of these understandings is not applicable to the other. That is, both the tools and the conclusions produced from one understanding will yield skewed results when used with the other. One can control for these differences, but only if he or she is aware of them.

How similar are Arabic science fiction and the definitions of science fiction in Arabic to science fiction and its definitions in English? Put another way, how recognizable are Arabic science fiction and its definitions in Arabic to scholars or readers familiar only with its manifestations and definitions in English? Answering these questions requires multiple steps: (1) defining science fiction as it is understood in the Anglophone discourse community; (2) locating works in Arabic that identify themselves as Arabic science fiction and (3) applying this definition to the identified Arabic science fiction to see if the definition fits.

I will first review recent attempts at defining science fiction, sometimes abbreviated “sf” or “SF,” focusing on those definitions that have used Wittgenstein's (1953) concept of “family resemblances.” Using these attempts at definition, and Stableford, Clute, & Nicholls' assertion that “In practice, there is much consensus about what sf looks like in its centre” (1993: 314), I will construct of model of prototypical science fiction. I will define “prototypical” science fiction using Rosch & Mervis's (1975) concept of prototypes and prototypicality, Fishelov's (1991) idea of the prototype as a

Next, I will use this model to examine secondary literature in Arabic on science fiction, focusing on Snir's assertion that definitions in this literature do not distinguish science fiction from fantasy nor do they clearly define science fiction.

Then, using Genette's (1997) concept of “paratext,” Schank & Abelson's (1977) concepts of scripts and headers, and Cook's (1994), Semino's (1997) and Stockwell's (2002) concept of literary schemata, I will examine the paratext of five novels written by a Lebanese author, Kassem Kassem, for generic cues indicating that the novels will read as science fiction. In chapters five, six, seven, and eight, I will develop the model of prototypical science fiction I constructed in the second chapter, using the more explicit model to examine five Kassem Kassem novels and demonstrate how they exhibit features of prototypical science fiction. Finally, in chapter nine, I will discuss the implications of finding features of prototypical science fiction in Kassem Kassem’s novels for the study of science fiction generally and the study of science fiction in Arabic specifically.
1.2. The Goals of this Dissertation

As a result of using these three steps, I aim to (1) create a framework for intercultural comparison of Arabic science fiction with Anglophone models by combining methods from discourse analysis, literary criticism, and genre theory; (2) evaluate several instances of Arabic science fiction through close reading and analysis of the formal features of text; (3) discover and analyze points of convergence and divergence between the model and the works of science fiction under examination; and (4) suggest avenues for further research that would enrich the domain of scholarship on Arabic science fiction.

Furthermore, I intend to establish that one author of Arabic science fiction writes a type of science fiction that demonstrates most of the features of prototypical science fiction. If Kassem’s novels are representative of other Arabic science fiction, then one can apply to Arabic science fiction the full range of critical tools found in English-language science fiction studies. Moreover, if this resemblance is significant, then Arabic science fiction could be integrated into science fiction studies alongside mainstream science fiction rather than marginalized as international science fiction.
2. Defining Science Fiction and Prototypical Science Fiction: A Model

“There is really no good reason to expect that a workable definition of sf will ever be established. None has been, so far. In practice, there is much consensus about what sf looks like in its centre; it is only at the fringes that most of the fights take place.”

“It is symptomatic of the complexity of science fiction as a generic category that critical discussion of it tends to devote considerable attention to the problem of definition--much more so than is the case with such superficially analogous genres as mystery fiction or romance, and perhaps even more than with such larger categories as epic or the novel itself. No definitional consensus exists.”

“Science fiction was until recently sold together with pornography.”

2.1. Defining Science Fiction

What is science fiction? This is both the most basic and the least easily answered research question in science fiction studies. Wolfe (1986) listed no less than 33 definitions of science fiction, none of which is universally accepted as the single definition. The definitions in Wolfe's list range from the quaint--“A charming romance intermingled with scientific fact and prophetic vision” (Gernsback 1926a: 3, quoted in Wolfe 1986: 109)--to the direct and often quoted “[science fiction is] what we point to when we say it” (Knight 1952: 122, quoted in Wolfe 1986: 108). Nor has science fiction scholarship exhausted its production of definitions; scholars continue to introduce new

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5 I am speaking here of the Anglophone science fiction studies discourse community, though I am not aware of any discourse community that has reached such a consensus.

6 Kincaid (2005) points out that Knight's quotation is taken out of context, and that it has much more nuance when placed back in that context: “The term 'science fiction' is a misnomer...it will do us no particular harm if we remember that, like the Saturday Evening Post, it means what we point to when we say it” (quoted in Kincaid 2005: 44).
definitions, ranging from the relatively succinct—“...science fiction is about what could be but isn't...” (Card 1990: 22)—to the complex and extended:

S[cience] f[iction] is that species of storytelling native to a culture undergoing the epistemic changes implicated in the rise and supersession of technical-industrial modes of production, distribution, consumption and disposal. It is marked by (i) metaphoric strategies and metonymic tactics, (ii) the foregrounding of icons and interpretative schemata from a collectively constituted generic 'mega-text' and the concomitant de-emphasis of 'fine writing' and characterisation, and (iii) certain priorities more often found in scientific and postmodern texts than in literary models: specifically, attention to the object in preference to the subject.
(Broderick 1995: 158)

The definition most often used in academic circles is from Darko Suvin's *Metamorphoses of science fiction: On the poetics and history of a literary genre* (1979): “S[cience] F[iction] is...a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment” (Suvin 1979: 7-8; italics in the original). Critics point out two problems with this definition. First, it forces one to include as science fiction works not usually thought of as science fiction, such as Bertolt Brecht's theatrical works (Freedman 2000: 19). Second, it forces one to exclude works generally agreed upon to be science fiction, such as the *Star wars* films and the *Star trek* films and television programs, which do not contain “many very complex or interesting cognitive estrangements” (Freedman 2000: 19), and the works of Robert Heinlein, an influential author whose works are widely read as science fiction, because they are similarly not “estranging” (Attebery 1992: 107). For these reasons, Suvin’s definition is inadequate.
In this chapter, I will construct a model of the science fiction genre using the concepts of family resemblances and prototypes as its basis. In the chapters that follow, I will discuss this model’s components, apply it to novels by Kassem Kassem, a Lebanese writer, and compare it to the definitions used by scholars of science fiction writing in Arabic.

2.2. Family Resemblances and Prototypes

2.2.1. The Concepts of Family Resemblances and Prototypes

In response to Suvin’s use of the Aristotelian concept of definition using necessary and sufficient conditions, some of the more recent definitions of science fiction rely on the concept of “family resemblances.” The philosopher Ludwig Wittgenstein introduces the “family resemblance” concept in his book *Philosophical investigations* (1953). Examining the concept of “games,” Wittgenstein asserts that there is not “anything common to all” games or types of games (1953: 31), and thus no definition in the traditional sense. Instead, there are “similarities” and “relationships,” or “a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail” (1953: 31-32). Likening these similarities to those among members of an extended family, Wittgenstein calls them *familienähnlichkeiten* 'family resemblances,' “…for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc. etc. overlap and criss-cross in the same way” (32). Thus, Wittgenstein says, using this method of categorization, “‘games' form a family” (32). Also, using this method, a conceptual
category is not “closed by a frontier” or “bounded” (33), but rather “a concept with blurred edges” (34). Finally, Wittgenstein notes that one can make and use an *ad hoc* definition, if needed: “To repeat, we can draw a boundary—for a special purpose” (33).

Lakoff (1987) relates how different aspects of Wittgenstein's concept of family resemblances were developed in the study of categorization over the course of the 20th century by Austin (1961), Zadeh (1965), Lounsbury (1964), Berlin & Kay (1969), Kay & McDaniel (1978), Brown (1958), Berlin, Breedlove, & Raven (1974), Ekman (1971) and Ekman, Friesen, & Ellsworth (1972). However, Eleanor Rosch, in a series of works in the 1970s, made the greatest leaps in the development of the theory, creating an overarching “general perspective” and “what has since come to be called...‘prototype theory’“ (Lakoff 1987: 163). Rosch, a psychologist, investigated how people categorize anything. Her early research examined how people categorize colors (Heider 1971, 1972, Rosch 1973), but she soon expanded her research to other objects of categorization: “tree[s], bird[s], fish, fruit, musical instruments, tool[s], clothing, furniture, and vehicle[s]” (Rosch 2004 [1978]: 95), as well as weapons, vegetables, sports, and toys (Rosch 1975). In one particularly key work of prototype theory, Rosch & Mervis (1975) connect prototype theory to family resemblances by demonstrating that prototypical members of a category and “nonprototype members,” members that do not epitomize or instantiate the prototype as fully, of a category are in fact related to one another through family resemblances.
Geeraerts (1989) summarizes prototype theory as it was developed by Rosch and others by citing “four characteristics that are frequently mentioned...as typical of prototypicality” (1989: 592):

i. Prototypical categories cannot be defined by means of a single set of criterial (necessary and sufficient) attributes...

ii. Prototypical categories exhibit a family-resemblance structure, or more generally, their semantic structure takes the form of a radial set of clustered and overlapping meanings...

iii. Prototypical categories exhibit degrees of category membership; not every member is equally representative for a category...

iv. Prototypical categories are blurred at the edges... (Geeraerts 1989: 592-593).

Geeraerts (1989) also notes that these are not the only possible characteristics of prototypicality nor do they always occur at same time.

An important aspect of prototype theory that is not always addressed is the nature of prototypes themselves. Taylor (1989) and Lakoff (1987: 137) note that the term “prototype” has come to be used in two different ways in scholarship on prototype theory:

We can apply the term to the central member, or perhaps to the cluster of central members, of a category. Thus, one could refer to a particular artefact as the prototype of CUP. Alternatively, the prototype can be understood as a schematic representation of the conceptual core of a category. On this approach, we would say, not that a particular entity is the prototype, but that it instantiates the prototype. (Taylor 1989: 59)

Each scholar also asserts that Rosch rejects both of these ideas of a prototype (Taylor 1989: 59n1; Lakoff 1987: 137). However, Rosch herself, in a later summary article (Rosch 1999), seems to use prototype in both ways. She first writes, “The judged best examples of conceptual categories are called prototypes” (Rosch 1999: 65; emphasis
in original), which seems to mean Rosch believes prototypes are exemplars, but then writes, “One of the most philosophically cogent aspects of prototypes is that, far from being abstractions of a few defining attributes, they seem to be rich, imagistic, sensory, full-bodied mental events that serve as reference points in all of the kinds of research effects mentioned above” (65-66), which seems to mean she votes in favor of prototypes as abstractions, albeit “full-bodied” abstractions.

Lakoff (1987) adds yet another concept to prototype theory, the idealized cognitive model, or ICM. According to Lakoff, prototype effects occur because “we organize our knowledge by means of structures called...ICMs” (68), but ICMs do “not fit the world very precisely” (70). The more the difference between an ICM and something from our experience of the world, “the less appropriate it is for us to apply the concept. The result is a gradience--a simple kind of prototype effect” (71). In one way, then, an ICM seems to be a model of a prototype.

Additionally, ICMs themselves are of various kinds--propositional, image-schematic, metaphoric, metonymic, and symbolic--and the propositional ICM has various types of internal structure (Lakoff 1987: 284). One such internal structure is a radial structure in which the center is a subcategory related to other, noncentral subcategories through family resemblances (Lakoff 1987: 65, 287, 379), the same sort of structure used in prototype theory. Thus, within Lakoff’s theory of ICMs, the central subcategory of a radially structured propositional ICM is another possible definition of a prototype.
2.2.2. The Concepts of Family Resemblances and Prototypes Applied to Literary Genre

Theory

In the study of literature and literary genre, scholars have used both the concept of family resemblances and the concept of prototypes. Soon after Wittgenstein's initial explanation of the family resemblances concept was published, Weitz applied the concept first to works of art generally (Weitz 1956), then to Shakespeare's *Hamlet* (Weitz 1964). Other scholars applied the concept to the specific genres of satire (Elliot 1962), picaresque (Guillén 1971), and pastoral (Alpers 1982). Among these earlier scholars, Hough (1966) applies the concept of family resemblances the most generally, to the “theory of kinds” and “literary kinds,” that is, literary genres.

A pivotal work in the application of family resemblances to literary genres is Alastair Fowler's *Kinds of literature: An introduction to the theory of genres and modes* (1982). Fowler notes that “genres...are positively resistant to definition” and therefore “[d]efinition is ultimately not a strategy appropriate to their logical nature” (1982: 40). Instead, citing other scholars who discussed the application of the concept of family resemblances to the arts in general (Mandelbaum 1965), to a single literary genre, satire (Elliott 1962), and to the “theory of kinds” and “literary kinds” (Hough 1966), Fowler applies the concept to literary genres: “Literary genre seems just the sort of concept with blurred edges that is suited to such an approach. Representatives of a genre may then be regarded as making up a family whose septs and individual members are related in various ways, without necessarily having any single feature shared in common by all” (Fowler 1982: 41). He adds to these ideas two apparently contrasting warnings.
First, citing Mandelbaum’s (1965) caution, he adds that the “family” in “family resemblances,” that is, the “biological relations”--or “literary tradition,” in its generic application--must be emphasized as much as the “resemblance”: “As kinship makes a family, so literary relations of this sort form a genre” (Fowler 1982: 42). Without this proviso, one could construe coincidental resemblances between literary works as evidence of a generic relationship. At the same time, citing Alonso (1960), Fowler writes that the scholar “need[s] to leave room for polygenesis...and for remote influences” because “simple chronological lines of descent” do not alone make a genre (43). In the end, Fowler seems to want it both ways:

Deciding in just what sense a feature is generic may be difficult. For some purposes it may be necessary nonetheless. But for criticism of subsequent contributions to the genre, the source of genre linked features may be quite irrelevant. What matters is simply the coding rule and its immediate application, not how it came to be known.” (Fowler 1982: 43)

Eventually, scholars also applied prototype theory to literary genre. Ideas preceding but similar to Rosch’s prototype theory appear in literary genre scholarship as early as 1962. Elliot, discussing satire, suggests one of the ways to define that genre:

“...one looks at a number of satires about which there is no question--which are at the center of the concept, so to speak--and then decides whether work x has resemblances enough to the undoubted examples of the type to be included in it” (Eliott 1962: 23).

Ryan (1981), citing Wittgenstein and his “family-resemblance notions” (118), forms a genre theory similar to prototype theory, and uses language--“highly typical,” “less typical members,” “quasi-members” (118)--that echoes Rosch & Mervis’ (1975) division of “prototype...and nonprototype members” (574).
Later scholars cite Rosch by name and apply her research to genre theory. Swales (1990), for example, who defines prototypes as “the most typical category members...” (52), sees prototype theory applied to genre as “a course between trying to produce unassailable definitions of a particular genre and relaxing into the irresponsibility of family resemblances” (52), and he holds that “properties, such as form, structure and audience expectations...operate to identify the extent to which an exemplar is prototypical of a particular genre” (52). Fishelov (1991) seems to combine the ideas of a prototype as a theoretical “feature bundle” with the idea of a prototype as an actual, existing work to create a dual prototype concept for literary genres: “It is this combination of certain typical traits with prototypical members of the generic category that constitutes the core of our generic concept” (133).

While the preceding scholars concentrate on prototypical members of a genre, that is, actual works, others emphasize the prototype itself, that is, a theoretical center rather than an actual work. For example, Reichert (1978) suggests that “[s]ometimes it is as if the theorist were conjuring up, in his definitions, an imaginary work, purified of all gross elements, but neatly illustrative of some structural principle that is hard to untangle from the knotty substance of a real work” (76). Such an “imaginary work” seems synonymous with the conceptual, theoretical idea of a prototype. Paltridge (1997), citing Rosch, also takes a prototype to be purely theoretical, “a prototypical image they [i.e., people] build in their mind of what it is that represents the object in question” (Paltridge 1997: 53), but believes it is through the separate “stereotype” concept from Lakoff (1987) and Putnam (1975, 1978) “that category membership is actually established; that is, by reference to an
'idealized mental representation' (Lakoff 1987: 116) which contains characteristics, or properties, which may occur in many, but not necessarily every, actual instance of the prototype” (Paltridge 1997: 55). According to Paltridge, using such “mental representations,” one can “assign” “instances of genres...to particular categories...on the basis of pragmatic and perceptual aspects of communicative events” (1997: 56).

Another scholar builds on the work of Rosch and Coleman & Kay (1981). Meyer (1997) uses prototype theory to try to answer the question, “What is literature?” (1997: 3). To so so, he lists what he believes are the six characteristics of a prototypical literary work in the belief “that speakers of English will show the strongest agreement, and will express the strongest confidence in their judgment, on works which have all of these characteristics” (Meyer 1997: 3). Effectively, Meyer has constructed the prototype of “literary work,” though he does not describe his work in those terms.

De Geest & van Gorp (1999) also uses Lakoff’s (1987) concepts. Like Paltridge (1997) and Reichert (1978), de Geest & van Gorp (1999) see a prototype as “a kind of hypothetical cognitive construction,” and they recount a number of aspects of prototype theory that they emphasize apply to a genre model: the properties of the prototype are not necessary and sufficient conditions for the genre (41); a work may “share only a few characteristics with the prototypical generic model while it is still recognised as a genuine though rather atypical member of the genre category...” (41-42); and any two works in a given genre may not share common attributes because they share different “family resemblances” with the prototype (42). They also emphasize that “literary genres are considered to be specific processing codes or communicational strategies” (34), just as
Swales (1990) and Paltridge (1997) do. However, unlike previous scholars, de Geest & van Gorp see prototypes more specifically as ICMs, “cognitive schemata which seem spontaneously to influence and even structure our daily experience and discourse in a fundamental manner” (1999: 41). Finally, they hint at one's ability and one possible method of constructing a prototype: “...the matrix of features taught in school and found in manuals of literary theory and reference works can be considered as the formulation of a generic 'prototype’” (50).

Mancing (2000) applies prototype theory to picaresque novels, as had Guillén (1971). However, whereas Guillén (1971), quoting Elliott (1962), centers a genre on a number of core works, Mancing (2000), like de Geest & van Gorp (1999), looks for a “theoretical prototype” (Mancing 2000: 133). In discussing prototypical members of the picaresque novel, Mancing (2000) emphasizes “that neither of these stories is the prototype, but merely the closest to it...” (137). Macing is even more specific than many other scholars applying prototype theory to literary works, calling a theoretical prototype “almost a Platonic ideal” (135n9) and equating the theoretical prototype with Lakoff’s (1987) ICM (Mancing 2000: 135n9).

Most recently, Williamson (2010) applies prototype theory to the genre of peshur, a “genre of biblical interpretation” (356) from among the Dead Sea Scrolls. Citing Chandler (1997), Williamson considers a genre to be an ICM. In addition to viewing the center of a genre modeled on prototype theory as an “ideal, 'prototypical' member of the genre” (337), rather than an actual member of the genre, Williamson attempts to construct a “model of the genre” (347) of peshur, much as Meyer (1997) tries to construct a model
of literature. To construct the pesher genre, Williamson “identif[ies] the texts that are generally recognized as belonging to the genre” (2010: 347), then uses those texts to “identify the compulsory, default, and optional elements constituting the schema of the genre...” (2010: 347). He subdivides default elements into “formal features” (348) and “literary devices and techniques” (349), and also looks for “relationships among all the various features” (349-350), which, following Lakoff (1987), he calls “Gestalt structures” (Williamson 2010: 350). Like Swales (1990), Paltridge (1997), and de Geest & van Gorp (1999), Williamson (2010) believes that genre has “communicative function” (352), but unlike previous authors, he specifies that these “systems of expectation” (353) are derived from genre's status as a “shared idealized cognitive model,” that is, a shared ICM (353).

2.2.3. The Concepts of Family Resemblances and Prototypes Applied to Science Fiction

2.2.3.1. Family Resemblances Applied to Science Fiction

Several scholars of science fiction have used these closely related concepts, though all seem to be unaware of the concepts' adoption by literary genre theorists. The first such science fiction scholar, Brian Stableford, used the “family resemblances” concept in 1985 to describe the group of 19th century British works he examined under the rubric of “scientific romance,” an early term for a group of literary works now considered early science fiction (Stableford 2003: 22-26). Stableford writes, “No strict definition of the term can or will be offered, on the grounds that -- like Wittgenstein's famous example of the word 'game' -- 'scientific romance' identifies members of a class
that have only 'family resemblances' between them” (Stableford 1985: 4). He does not elaborate much more than this, concluding that “There is vagueness about the term, but it reflects a vagueness about these perceptions” (Stableford 1985: 4). One of his statements suggests prototype effects, though he does not refer to prototype theory: “Perhaps the most important thread which bound British scientific romances together from the viewpoints of their producers and consumers was the example and inspiration of H.G. Wells” (Stableford 1985: 4). Most importantly, Stableford does not state what he perceives the family resemblances among the works to be, forcing the reader to attempt to discern the resemblances and features among the works examined.

2.2.3.2. Prototypes and ICMs Applied to Science Fiction

Other science fiction scholars have more openly used the concepts of prototypes and ICMs. Brian Attebery (1992), citing Lakoff & Johnson (1980), proposed a definition of the fantasy genre based on the mathematical concept of “fuzzy sets,” “meaning that they are defined not by boundaries but by a center...”, that center being “central, prototypical examples” (Attebery 1992: 12). Attebery then asks, “Is fantasy a fuzzy set? From what center do we perceive it radiating?” (Attebery 1992: 13) He resolves that fantasy is, indeed, a fuzzy set centered on The lord of the rings: “...Tolkien's form of fantasy, for readers in English, is our mental template, and will be until someone else achieves equal recognition with an alternative conception. One way to characterize the

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7 Although Attebery (1992) uses the terms “fuzzy set” and “fuzzy set theory,” these are not the phrases used in the work he cites, Lakoff & Johnson (1980), which talks about prototypes. Fuzzy set theory, developed by Zadeh (1965), is related to prototype theory but is not synonymous with it.
genre of fantasy is the set of texts that in some way or other resemble *The Lord of the Rings*” (Attebery 1992: 13-14). However, Attebery continues, the works that seem to use *The lord of the rings* as an exemplar do not bear resemblances to all the features of that series, nor could “one...guess which of its features have become dominant in modern fantasy” (Attebery 1992: 14). Instead, modern fantasy works seem to concentrate on three particular features of Tolkien's books: (1) “The essential content is the impossible...” (Attebery 1992: 14); (2) “...the characteristic structure of fantasy is comic. It begins with a problem and ends with resolution...” (Attebery 1992: 15); and (3) the reader should experience “wonder” (Attebery 1992: 15-16). That is, the “prototype” of the modern fantasy genre is not *The lord of the rings*, but a model built using certain features of *The lord of the rings*.

In addition to this definition of fantasy, Attebery also applied the “fuzzy set” concept to science fiction: “Science fiction, like fantasy, is easier to recognize than to describe formally. Viewed as a fuzzy set, it clusters around representative texts...” (Attebery 1992: 106). He also names what he believes are some of the prototypical members of the genre: “H. G. Wells's *The Time Machine* (1895), E. E. 'Doc' Smith's Skylark series (1928-66), Robert E. Heinlein's *Citizen of the Galaxy* (1957), Arthur C. Clarke's *Rendezvous with Rama* (1973), Anne McCaffrey's *Dragonflight* (1968), and Ursula K. Le Guin's *The Left Hand of Darkness* (1969)...” (Attebery 1992: 106). Additionally, Attebery writes that “each of those titles represents a set within the larger set of science fiction...” that is, a science fiction sub-genre such as “space opera” or “New Wave” (106). This conceptualization of a category with sub-categories that are radial sets
of their own is very much like Lakoff’s (1987) idea of a propositional ICM having a “radial category structure” (Lakoff 1987: 284-287; see also Cienki 2007: 178).

In 1996, Istvan Csicsery-Ronay, Jr., suggested a definition along these lines in an article titled “The seven beauties of science fiction,” a phrase that would also become the title of his later book of science fiction criticism (2008). In the article, Csicsery-Ronay writes about a handout that he gives to his undergraduate science fiction classes in which he poses the question, “What makes science fiction science fiction?” (1996: 386). In answer to the question, he lists on the handout seven features of science fiction: neologisms; novums; historical extrapolation/historical futurism; oxymoron; scientific impertinence; sublime chronotopes; and parable (386). However, he also tells his students that all the features need not be present for a work to be defined as science fiction: “I warn my students that there are probably few works that would check positive for all the Seven Beauties, which leaves them considerable leeway in investigating the texts” (386). Like the idea of a “fuzzy set” definition, this “list of possibilities” definition allows for core works that might have all the features and for fringe or peripheral works that may have few.

Peter Stockwell uses the “prototype” concept in his book The poetics of science fiction (2000) as the basis for his definition of the science fiction genre. After introducing the “prototype” concept, citing Lakoff (1987) and Rosch & Lloyd (1978), Stockwell applies the theory both at the level of the individual and at the level of the “cultural

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8 Csicsery-Ronay calls them “categories,” but his choice of terms is misleading: he does not use them to categorize or typologize science fiction, he uses them to define it. Therefore, I have not introduced his term here.
group” (2000: 7). For the individual, he writes that “determining the prototypical domain for a category is a matter of the perception of individuals” and therefore, “...different readers will have different ideas of which texts count as science fiction” (2000: 7). At the same time, “…objects vary in their membership of categories along with differences across cultural groups” (2000: 7), meaning that “There are, for everyone, central examples of science fiction, and texts that would be considered peripheral, and this is in general a matter of cultural consensus, experience, and personal idiosyncrasy” (2000: 8). However, in terms of any kind of overt definition, this is as far as Stockwell is willing to go, and even then, he considers the application of prototype theory to be an “approach” rather than a “generic definition,” which he avoids as a step toward canonization and its connected “elitism” (2000: 8).

Most recently, Paul Kincaid (2005) made Wittgenstein's (1953) concept of “family resemblances” central to his definition of science fiction. Although he does not mention prototypes, Kincaid's definition is very much like Rosch & Mervis' (1975) definition of a category consisting of a prototype related to other members of the category through family resemblances. According to Kincaid, “…all we need as a starting point is common agreement that something is science fiction...[a]nd there are many hundreds, indeed thousands, of works whose identity as science fiction is not problematic” because “…certain works are unequivocally part of the heartland of science fiction...” (Kincaid 2005: 48-49). In the terms used by genre theorists who embrace prototype theory, these would be “typical” or “prototypical members.” These “heartland” works are connected to other members through family resemblances, and together these constitute the science
fiction genre: “...science fiction [is what]...has family resemblances with what we agree is science fiction” (Kincaid 2005: 50). Kincaid emphasizes that the genre is in “constant flux,” and that new members of the genre, even if they take the genre in a new direction, are identified as part of the genre through the family resemblances they have with established members (Kincaid 2005: 48). Unfortunately, other than a few passing examples, Kincaid is never specific regarding what the family resemblances are or what the “heartland” members of the genre are, leading the editors of the book in which his essay appeared to fault him for dodging a definition:

...when he claims that there are “central” texts of science fiction, texts about which no argument about their SF status exists, he implies that there is a definition of science fiction, despite his argument against it. Even when we can only point at what we recognize, intuitively, to include the right stuff, we can still ask: what are we pointing at; what is the right stuff? (Gunn & Candelaria 2005: 3)

To restate Gunn & Candelaria's criticism, if one is going to use a definition based on prototypes and family resemblances, one must, at a minimum, define the prototype.

2.2.3.3. Prototypical Science Fiction

If the science fiction genre may be viewed in terms of prototype theory, the next question is how to define the prototype. Again, such a prototype may be an ideal, a hypothetical model, and need not have an actual, single counterpart in reality (de Geest & van Gorp 1999). Nonetheless, it should have recognizable characteristics derived from real works, as does Attebery's (1992) prototype of the fantasy genre derived from Tolkien's *The lord of the rings.*

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9 I have not attempted to discern *gestalt* structures in the science fiction genre, though that might be another step one could take in describing the genre or its prototype.
In order to “produced a model of the genre,” one could “identify the texts that are generally recognized as belonging to the genre,” then “identify the compulsory, default, and optional elements” (Williamson 2010: 347). However, much of the initial work of deriving such elements has been accomplished in the scholarship of science fiction. For example, an account and an examination of some of these characteristics is available in Stockwell (2000). Despite his prefatory claim that he will not define prototypical science fiction, Stockwell’s book is “a disguised book-length academic, indeed putatively scientific, definition of sf” that “isolates” the “science-fictional qualities in texts” (Csicsery-Ronay 2004a: 125; 2004b). Stockwell himself writes in a later article that the “implicit criteria” that a reader has of what is or is not part of the science fiction prototype “amount[s] to a set of features...” (Stockwell 2003b: 253).

Using the works of Stockwell and other scholars as a foundation, I construct a model of the prototype. Because “the matrix of features taught in school and found in manuals of literary theory and reference works can be considered as the formulation of a generic ‘prototype’” (de Geest & van Gorp 1999: 50), Frow’s (2005) description of the three “structural dimensions of genre” (72)--formal organization, thematic contents, and rhetorical structure--is used as the framework for the construction of a three-part structure of prototypical science fiction. In turn, these three parts of the prototype model are constructed primarily on the basis of four works of science fiction scholarship: Stockwell

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10 Csicsery-Ronay’s review of Stockwell 2000 appeared in Csicsery-Ronay 2004a, but a short portion, including this sentence, was excluded from the original because of a typographical error. It appeared as a corrigendum in Csicsery-Ronay 2004b.

One should note that these categories “overlap” (Frow 2005: 76) and interact. That is, they are mutually supporting, and any one dimension “could...be expressed in terms of one of the other categories” (76). For example, prototypical science fiction's military-scientific register, a feature that falls in the category of formal organization, serves to demonstrate a relationship with science, a feature of the prototype's rhetorical structure. More generally, “...each of these dimensions can be thought to be 'thematic' in the sense that formal and rhetorical structures always convey meaning...” (76). No one structural dimension is entirely separate from the others.

2.2.3.3.1. Thematic Content

By “thematic content,” Frow (2005) means “the shaped human experience that a genre invests with significance and interest” (75). More specifically, the thematic content in written literature can be demonstrated through “a set of topoi, recurrent topics of discourse, or as a recurrent iconography” (75). In prototypical science fiction, the most salient content features are particular icons. Wolfe (1979) and Jones (2003) have each identified several “signs which announce the genre, which warn the reader that this is a different world; and at the same time constitute that difference” (Jones 2003: 163). Both scholars term these signs “icons” of science fiction. The icons upon which the two scholars agree include the spaceship, the robot, the alien, and the transformed human.
2.2.3.3.2. Formal Organization

According to Frow (2005), “The formal organisation of a genre comprises the repertoire of ways of shaping the material medium in which it works and the ‘immaterial’ categories of time, space, and enunciative position” (74). This organization includes “whether texts in the genre are normally long or short” (74); “…the shaping of the temporal and spatial relations of the projected world…” (74), and “certain kinds of tone,” such as whether the “manner is elevated or modest or somewhere in between…” (74). When applied to prototypical science fiction, this “repertoire of ways” includes linguistic and stylistic features, such as register and the use of deixis, as well as the prototypical length of a science fiction work.

2.2.3.3.2.1. The format and style of prototypical science fiction is derived from pulpstyle.

Taylor (1990) and Stockwell (2000) describe a particular style that partly defined the science fiction short stories of the pulp magazine era of the 1920s and 1930s, a formative period in the history of modern science fiction. This “pulpstyle” is the foundation for prototypical science fiction style (Stockwell 2000). Features derived from the science fiction of this period include material features, such as a short-story format, and stylistic features, such as a military-scientific register. However, the prototypical style is not pulpstyle per se, but a model drawing on parts of it, like an prototype of its own.
2.2.3.3.2.2. Prototypical science fiction uses deixis to establish non-human characters, extraterrestrial settings, and settings in the future.

Deixis “concerns the ways in which languages encode or grammaticalize features of the context of utterance or speech event...” (Levinson 1983: 54). Prototypical science fiction uses three kinds of deixis introduced by Levinson (1983)--person deixis, spatial deixis, and time deixis--to establish three features of prototypical science fiction. Stockwell (2000) adapts person deixis to science fiction by re-naming it “perceptual deixis” because “in science fictional (and other fantastic) universes humans, aliens, robots, computers, animals, and inanimate objects can have consciousness and so are able to use deictic expressions..” or have deictic expressions used in reference to them (27). Similarly, science fiction is prototypically “set...extra-terrestrially” (Stockwell 2000: 31) or “in space” (Stockwell 2004: 518), and spatial deixis is used to establish and reinforce this prototypical setting. Third, Stockwell focuses on how the use of the narrative past tense is used to establish a prototypical feature of science fiction, a future setting (Stockwell 2000: 34; Stockwell 2004).

2.2.3.3.3. Rhetorical Structure

The “rhetorical structure of a genre” is the “organis[ation]” of the “textual relations” of the sender to the receiver, which are, in literary terms, the author and the reader (Frow 2005: 74). Most importantly in a definition of prototypical science fiction, the rhetorical structure is a manifestation of “negotiation and an agreement (or disagreement) about the kind of truth status that is to be attributed to what is being talked
about” (Frow 2005: 75). Stockwell (2003b), discussing the “truth value status” (254) of science fiction, writes that “sf is a form of fiction in which the fictionalized world is foregrounded as being alternate to our own actual world. It is distinguished from fantasy, magical realism, gothic and horror by the presence of elements of plausibility, by a traditional association with the ideology of the scientific method and by a technique of logical extrapolation from the current state of knowledge…” (Stockwell 2003b: 254-255).

2.2.3.3.3.1. Prototypical science fiction presents a world that is significantly alternative to the real world.

Prototypical science fiction shares the characteristic of “alternativity” with all literature (de Beaugrande 1987; Stockwell 2002: 80, 91, 94-96), making it a necessary characteristic of all science fiction. However, the alternativity of prototypical science fiction is notably greater than that of most other types of fiction, a characteristic it shares with all literature of the fantastic (de Beaugrande 1987: 59; Stockwell 1996, 2002a). Because of this similarity, Stockwell (2003b) points out three further content-based characteristics to differentiate prototypical science fiction from other sub-genres of the fantastic.

2.2.3.3.3.2. Prototypical science fiction is plausible.

Prototypical science fiction is written such that it is “worthy of belief” by the reader despite its significant alternativity (Dickson 1974: 295). Thus, “The 'world' built
by the narrative must be one that convinces the reader, at least for the duration of reading
the text, that...[it] is a reasonable and coherent scenario” (Stockwell 2000: 12). Moreover,
plausibility is an agreement between the science fiction author and the reader, or, as
Dickson (1974) puts it, an agreement between science fiction itself and the reader: “It
contracts with its readers to provide not only...necessary [story] elements but also to offer
an experience outside of ordinary reality; and it undertakes to make this particular
experience believable--however unfamiliar or bizarre--or fail as a story” (Dickson 1974: 295).

2.2.3.3.3. Prototypical science fiction demonstrates a relationship with the scientific
tradition.

Although the “science” present in science fiction is not necessarily sound in terms
of current scientific knowledge, science fiction typically has some scientific aspects,
referred to variously as “scientific terminology” and “the megatext of science” (Attebery
(Wendland 1985: 11), “imaginary science” (Csicsery-Ronay 2008), or, in the quotation
cited previously, “an association with the ideology of the scientific method...” (Stockwell
2.2.3.3.4. Prototypical science fiction demonstrates extrapolation from the current state of knowledge.

In the study of science fiction, extrapolation “is used to mean the technique of basing imaginary worlds or situations on existing ones through cognitive or rational means...” (Wolfe 2005: 16). More simply, it is a technique of writing a story which finishes the sentence, “If this goes on....” (Samuelson 1993: 199). Prototypical science fiction uses the future as a setting in which it can present this extrapolation.

2.3. Conclusion

There is no single definition of science fiction upon which scholars or non-scholars agree. Most available definitions either include works not generally thought of as science fiction or exclude works generally thought of as science fiction. One way to avoid such absolutes and to make use of the implicit cultural definitions of science fiction is to use Wittgenstein's concept of “family resemblances,” which has more recently been developed by Rosch and others as the theory of prototypes. In such a definition, a work participates in the science fiction genre to the degree that it shares attributes with the prototype. The prototype itself is a theoretical construct or model consisting of attributes derived from works generally agreed upon to be science fiction. In this dissertation, I construct the science fiction prototype using Frow's (2005) “structural dimensions of genre” (72), which are thematic content, formal organization, and rhetorical structure.
3. Secondary Literature Review

Very little scholarship has appeared in European languages about Arabic-language science fiction or on Arabic-language science fiction scholarship.11 The little that has appeared generally concentrates on a single work (Camera d'Afflitto 1997; Ayed 2006), two works (Ayed 2005; Qader 2002), or single authors (Olša 1995b, 1995c). Of the broader surveys that have appeared, two (Olša 1993, 2001) are extremely short, allowing for little more than a brief description of several novels. Only Reuven Snir's article, “The emergence of science fiction in Arabic literature” (2000), and a paragraph in his Modern Arabic literature: A functional dynamic model (2001) address science fiction in Arabic as a whole and at length. In these two studies, Snir attempts to create a model of its workings and to address science fiction scholarship in Arabic.

Snir's evaluation of science fiction scholarship in Arabic is not a positive one:

...research into the development of science fiction (khayāl ʿilmī) in Arabic literature is limited to only a few recent studies by Arab scholars who do not belong to the canonical center of the literary system. These studies are confined mainly to description of original Arabic works in this domain, without any attempt to investigate the background issue of how this genre developed through interference from American literature. (Snir 2001: 39; footnote in original text omitted)

Snir's critique of the treatment of science fiction's development in Arabic is generally correct. While Arabic works of science fiction are often listed chronologically or geographically, and may include titles and summaries, commentary on influences, whether from Arabic or non-Arabic texts (or films), is often absent. However, most do

11 Because the goal of this dissertation is to determine whether the definitions of science fiction used in the Anglophone community is the same as those used in Arabic, I have included Arabic science fiction criticism only as an object of examination in this chapter rather than as scholarly literature added to the initial review. Arabic scholarly literature of science fiction is discussed briefly in chapter nine.
include mention of Jules Verne and H.G. Wells, the masters of 19th century “scientific romance,” which is usually considered the precursor to modern science fiction.

What is more important for the topic of this dissertation is the comment in the footnote to that evaluation, in which Snir writes, “It seems that science fiction is not always clearly defined and scholars sometimes confuse it with fantasy” (Snir 2001: 39n181). The two issues Snir raises are definitional issues.

3.1. Are “science fiction” and “fantasy” confused in Arabic scholarly literature?

In an earlier work on Arabic science fiction, Snir cites a number of “critics [who] confuse it [i.e., science fiction] with fantasy...” (2000: 267), including Qāsim (1993), Rāghib (1981), ‘Azzām (1994), and Bahī (1994) (Snir 2000: 267n24). Snir (2000) acknowledges that even the authors of the authoritative Encyclopedia of science fiction (1993) do not believe science fiction and fantasy can be fully separated from one another (Nicholls 1993a). Moreover, a work may “participate” in multiple genres (Derrida 2000 [1980]). However, all of this is substantially different from “confusing” the two genres, and even Nicholls (1993a) writes that there is much to distinguish the two genres, despite their close relationship, not the least of which is science fiction’s relationship with the scientific method (see sections 2.2.3.3.3.3 and 8.3). Do scholars writing in Arabic confuse science fiction and fantasy?

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12 For a model of the fantasy genre in English, see Attebery’s (1992) description in section 2.2.3.2 of this dissertation. In fantasy studies, “a consensus has emerged” that “a range” of definitions of the genre is useful, with particular aspects being chosen according to one’s immediate needs (Mendlesohn 2008: xiii).
3.1.1 Scholars who confuse science fiction and fantasy

Confusion is evident in two of the sources that Snir cites. ‘Azzām (1994) sets out to examine the *mażāhir* ‘features’ of science fiction in traditional popular Arab literature, including *1001 Nights* and *Sinbad* (‘Azzām 1994: 13). While this is an achievable goal--‘Abd Allāh al-Yāsīn (2009) successfully does just this--the features of “science fiction” that ‘Azzām finds in the story ‘*abd allāh al-barrīyy wa-‘*abd allāh al-bahriyy ‘Abd Allāh the Landgoer and ‘Abd Allāh the Merman’ (‘Azzām 1994: 22) do not seem to fit either his definition of science fiction or the one used in this dissertation (see section 2.2.3.3). Just before discussing the fictional “kingdom of the sea,” its animals, its cities, and its people, ‘Azzām states, *hūnā yabda*’ (al-*khayāl al-*ilmīyy) Here begins “science fiction” (1994: 23). However, none of what follows this statement fits even ‘Azzām's own definition of science fiction; it neither “relies on scientific thought” nor does it “call for a solution to its [i.e., humanity's] social problems” (‘Azzām 1994: 10). At a different point, ‘Azzām mentions that “magic was the 'science' of that early time” (17), a statement that simultaneously demonstrates an awareness of the difference between science fiction and fantasy and serves to confuse the definition of science fiction. Science and the scientific method are features of prototypical science fiction, at least as used in this essay, while magic is not. In trying to find science fiction in these medieval works, ‘Azzām abuses his

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13 One aspect of the undersea world, the undersea economy in which jewels have no value but the main foodstuff, fish, is the only unit of currency, could be viewed as presenting some kind of economic alternative, but ‘Azzām does not point this out.
own definition of science fiction and cites features that are not part of the definition of science fiction used in this dissertation.

Another critic Snir cites, Rāghib (1981), goes well beyond confusing science fiction and fantasy. Rāghib's definition of al-riwāya al-‘ilmīyya the scientific novel', the term he chooses to translate “science fiction” (Rāghib 1981: 221),14 not only includes fantasy, but also seems to include most modern novels:


...it is possible for us to apply the term “scientific novel” to most of the novels in Europe which addressed the pressures exerted by the industrial revolution as one result of the technological advancement in the middle of the last century. This applies, for example, to some of the novels of Dickens, Mrs. Gaskell, Trollope, Zola, and Balzac. (Rāghib 1981: 107)

At another point, Rāghib writes that Melville wrote Moby Dick according to kharīṭat al-riwāya al-‘ilmīyya ‘the scientific novel's plan' in that Melville needed scientific knowledge of whales and whaling to write the novel (Rāghib 1981: 106-107).

While anyone is welcome to define genres as he or she sees fit, the expansiveness of Rāghib's definition of science fiction is beyond that used by any other scholar in

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European languages or in Arabic. This definition is useful neither for “classifying” nor for “identifying and communicating,” to use Fowler's (1982: 38) terminology.

3.1.2. Scholars who do not confuse science fiction and fantasy

However, such confusion does not appear in the other two sources Snir (2000) cites. Both Qāsim (1993) and Bahī (1994) seem quite aware of the differences between science fiction and fantasy. Qāsim (1993) makes a clear statement early in his chapter on Arabic science fiction regarding this distinction:

It is incumbent upon us first to clarify that the language of the sciences must be used in the vocabulary of science fiction, and that there is a difference between fantasy and science fiction..the world of magical fantasy, including marvelous visions, differs completely from science fiction..(Qāsim 1993: 197)

Bahī (1994) seems equally aware:

This definition is useful in distinguishing science fiction literature from the (literary) genre connected to it but differing from it, fantasy... (Bahī 1994: 11-12)
Only a few pages later, Bahī (1994) again demonstrates his awareness of the difference between science fiction and fantasy as well as a desire to separate the two in a definition of science fiction:

...muştahih “al-adab al-khayāliyy al-ta‘mmuliyy Speculative Fiction” qad yakun akthar diqqa li-anna-hu yusū‘īd, ‘alá al-aqall, fī al-tamyīz bayn al-khayāl al-‘ilmīyy wa-adab al-khayāl al-jāmiḥ aw al-ḥurr...

...the term 'speculative fiction' might be more precise because it helps, at least, in distinguishing science fiction and fantasy.... (Bahī 1994: 15)

Both Qāsim (1993) and Bahī (1994) seem fully aware of the distinction between science fiction and fantasy.

Some of the fault Snir finds with the definition of science fiction as used by these last two scholars may stem from the inclusion of works of Tawfīq al-Ḥakīm in their examinations of science fiction in Arabic and the Arab World. In the footnote attached to his statement that “[s]ome critics confuse it [i.e., science fiction] with fantasy...” (2000: 267), Snir writes that Bahī (1994) “argu[es] that a traditional dramatist like the Egyptian Tawfīq al-Ḥakīm [1898-1987] in fact wrote SF” (Snir 2000: 267n24). Both Qāsim (1993) and Bahī (1994) address works of Tawfīq al-Ḥakīm at length: Qāsim (1993) discusses the short story fī sanat milyūn ‘In the year one million' and the plays law ‘arifa al-shabāb 'If the young people knew,' taqrīr qamariyy 'Lunar report,' and riḥla ilā al-ghad 'Journey to tomorrow,' while Bahī (1994) discusses both law ‘arifa al-shabāb and riḥla ilā al-ghad as well as the play al-ṭa‘ām li-kul fam ‘Food for every mouth.' However, contrary to Snir's suggestion, all of these
works demonstrate elements of prototypical science fiction, including a future setting and extrapolation (fī sanat milyūn), scientific invention (law ‘arifa al-shabāb), extraterrestrial aliens (taqrīr qamariyy), a spaceship and extraterrestrial settings (rīḥla ilā al-ghad), and an association with the scientific method, extrapolation, and a doubly-foregrounded alternative world (al-ṭa‘ām li-kul fam).

In addition to the sources cited in Snir (2000), other scholarly sources in Arabic seem equally cognizant of the division between science fiction and fantasy. One of the earliest works of science fiction scholarship in Arabic, and the one most cited in scholarship on science fiction in Arabic, al-Shārūnī 1980, specifically excludes from a definition of science fiction al-fāntāziyyā ‘fantasy,’ “which embodies the dream of humanity to overcome temporal and spatial obstacles without that dream being built on any 'mathematical or empirical' scientific basis” (243), but still views fantasy as the “legitimate father of science fiction writing” (243). Al-Shārūnī is also careful to note that the works of Yūsuf ‘Izz al-Dīn ‘Īsā, which al-Shārūnī considers some of the first science fiction literature in Arabic, “carry all the characteristics of pioneering in this type of literature,” and are “thus...closer to fantasy than science fiction” (245). Al-Shārūnī’s later book (2000) repeats these ideas verbatim.

A book-length study of science fiction in Arabic, Tillāwī 1990, not only does not confuse science fiction and fantasy, it quotes scholar George Turner on the differences between fantasy and science fiction:

"...Amma فيفرق في تعريفه بين الخيال العلمي والفانتازيا...George Turner فيقول "الخيال العلمي يقدم طريقة بديلة للاهمالات العامة لدى الغالبية العظمى من القصص والقائمة بدورها على حقوق الحياة...أما نقيضه الأدب الفانتازيا فهو يعرف عادة بالخيال الخيالي الذي يقترح إقامة وجود طرق قيم الوجود الثانية من أجل خيال غير محدود. ومن بين التعريفين ينبري الخيال العلمي الذي يتتروح إقامة وجود طرق"
As for George Turner, he distinguishes in his definition between science fiction and fantasy, saying “science fiction offers an alternative approach to the common concerns of that great mass of fiction which is based upon the known facts of life...Its opposite, non-realistic fiction, usually identifies itself as a familiar genre, fantasy, wherein known parameters of existence are ignored in favour of unrestricted fantasy. Between these lies science fiction, suggesting alternative modes of existence (in future times, on other worlds or simply in the minds of the characters) based on facts which connect them with the real world while confining the imaginative element to logical development.” (Tillāwī 1990: 25-26 quoting Turner 1983: 116; for the English translation of Turner's quotation, rather than creating an English translation of the Arabic translation of the original English [“backtranslating”], I have given the original English passage from Turner 1977: 257)

Although Tillāwī (1990) includes chapters on the “roots” of science fiction in myths and legend, he does not include those in a definition of science fiction itself. However, after acknowledging the need to define science fiction and reviewing the definitions proposed by a number of scholars from Europe, the United States, and the Arab World, he concludes that he cannot settle on a definition of science fiction (25-27)—a common sentiment in much science fiction scholarship in English.

Even ‘Azzām, in a later work (2000), seems to have altered his views or his focus to acknowledge a difference between science fiction and fantasy. In this work, he does
not try to connect science fiction to *1001 Nights* or to any other work in Arabic prior to the works of Tawfîq al-Hâkîm (‘Azzâm 2000: 20). In examining the works of Ṭalib ‘Umran, ‘Azzâm lists specific *khaṣāṣ adab al-khayāl al-‘ilmiyy* 'characteristics of science fiction literature' (163) which amount to a definition of science fiction. These characteristics include *al-tanabbu‘ al-‘ilmiyy* 'scientific prediction' (163) and *nisbiyyat al-zamān wa-al-makān* 'relativity of time and space' (165). Most importantly, in his discussion of a particular characteristic, *khayāl bi-lā ḥudūd* 'limitless imagination,' ‘Azzâm makes this statement:


With this, ‘Azzâm not only distinguishes between science fiction and fantasy, he simultaneously acknowledges that they share at least one feature. This nuanced statement suggests significant change in his views between the writing of his 1994 book and this one.

With the publication of the Syrian journal *al-khayāl al-‘ilmiyy* and its distribution free of charge on the internet, the scholarly discourse in Arabic on science fiction is growing even more aware of the details of science fiction and how it differs from other forms of the literature of the fantastic. For example, in a recent article, Muḥammad ‘Abd Allāh al-Yāsîn notes the importance of distinguishing science fiction from fantasy. He also asserts that one cannot say that Arab science fiction is part of the popular Arabic
literature tradition because it instead resulted from influence from translated science
fiction (‘Abd Allāh al-Yāsīn 2009: 7-8). However, after acknowledging all of this, he
pleads with the reader:

But is it not unfair to deny any glimmer of science fiction in the sources of the
Arab heritage or [ancient] popular literature? Is it fair for the critic to claim that
the Arab heritage is completely devoid of accounts or stories that one could
classify in the category of science fiction? (‘Abd Allāh al-Yāsīn 2009: 9)

He proceeds to look for such “glimmers.” Although he engages in a project very similar
science fiction. On the contrary, he is careful to distinguish one from the other, and to
avoid a false literary history that leads from ancient popular Arabic literature directly to
modern science fiction. Fully aware of these limitations, he desires to look for
similarities, “glimmers of science fiction,” in that ancient literature, that is, individual
features of science fiction that might be present in that literature. Rather than ignoring the
actual literary context of science fiction, such a project engages in a dialogue with that
literary context.

3.1.3. Different definitions of the term al-fāntāziyyā

Further confusion regarding the treatment of science fiction and fantasy in Arabic-
language criticism may have arisen from the different meaning of the word al-fāntāziyyā
when it is applied to a branch of science fiction. Although *al-fāntāziyyā* is usually synonymous with “fantasy” as that word is used in English, an alternate meaning is also found in Arabic science fiction scholarship. This alternate meaning stems from the translation of a quotation from H.G. Wells. In the introduction to a collection of his own “scientific romance” novels, Wells contrasts Jules Verne’s work with his own: “These tales have been compared with the work of Jules Verne...As a matter of fact there is no literary resemblance whatever between the anticipatory inventions of the great Frenchman and these fantasies” (Wells 1933: vi quoted in Raknem 1962: 405). An early article of science fiction scholarship in Arabic translates this quotation, rendering “these fantasies” as *hādıhi al-qiṣaṣ al-khayāliyya* (*al-fāntāziyyā*). The article also adds a quotation from Verne himself contrasting his work with Wells’. In turn, the most influential article in early Arabic science fiction criticism, al-Shārūnī 1980, uses these quotations to establish a model of science fiction in which there are *ittijāhān* ‘two trends,’ one being represented by Wells and the other by Verne, the former less concerned with scientific accuracy and the latter more concerned with it (al-Shārūnī 1980: 244).

Because of this article’s influence in Arabic science fiction scholarship, a number of science fiction critics writing in Arabic use al-Shārūnī’s (1980) dichotomy, with one “trend” often being described as *fāntāziyy*. In these contexts, the exact meaning of *fāntāziyy* varies, though it is always in contrast to a category of science fiction that is more respectful of current scientific knowledge. For example, ‘Azzām (1994), who uses a number of ideas and verbatim passages from al-Shārūnī (1980) without citation, divides
science fiction into two trends, “philosophical” and “scientific.” Although he does not immediately describe either of those trends as *fāntāziyy*, he subdivides the “scientific” category, contrasting Verne's writing with Wells', and writing that Wells' “literature is built on a 'fantasy' [*al-fāntāziyy*] foundation” while Verne's “relies on scientific thought” (‘Azzām 1994: 10).

Others follow al-Shārūni's (1980) structure more closely. In a science fiction study written as part of the “future booklets” series, the Egyptian science fiction writer and critic Nihād Sharīf gives the two trends of science fiction “most accepted by the majority and most recognized in academic studies” (Sharīf 1997: 28). These two types, he writes, are “ordered” (*al-munḍabiṭ*, المنضبط) science fiction, which has a scientific basis, and “fantasy” (*al-jāmiḥ aw al-fāntāziyy*، الجامح أو الفنتازي) science fiction, which is “based on extremely exaggerated fictional images and visions and on oddity” (Sharīf 1997: 28).

Similarly, in an interview with BBC Extra in 2007 (BBC Extra 2007) and in a later journal article (‘Umrān 2008-2009), the Syrian science fiction writer and critic Ṭālib ‘Umrān establishes two categories of science fiction. ‘Umrān's first category is *al-adab al-jādd*، الأدب الجاد ‘serious literature’ (BBC Extra 2007) or *ittijāh jādd*، اتجاه جاد 'serious trend' (‘Umrān 2008-2009: 15), defined by its topic--“the concerns of humanity and its future problems”--and by the use of “a scientific method” in its narration. His second category is *ittijāh (fāntāziyy)*، اتجاه (فانتازي) “fantasy” trend,’ which “relies on excitement, on journeys between planets, on ugly creatures fighting man and sometimes landing on the planet, etc.” (BBC Extra 2007).
The “fantasy trend” to which Sharīf and ‘Umrān refer is likely that embodied in the novels of the Egyptian writer Nabīl Farūq, whose inexpensive (1 Egyptian Pound) and formulaic adventure-based novels are widely available and are probably the science fiction literature with which the average reader is most familiar (Snir 2000: 270-272). The term al-fāntāziyy, then, refers to the more popular trend of Arabic science fiction that Snir identified as “offer[ing] mere entertainment value and [that] is published to attract a wide readership and to provide quick financial reward” (Snir 2000: 270). In these contexts, al-fāntāziyy is not synonymous with the English term “fantasy,” which usually refers to a specific literary genre.

3.1.4. Conclusion: Confusing science fiction and fantasy

Snir is correct, a few scholars writing in Arabic do confuse science fiction and fantasy, but they appear to be a very small minority. Of the scholars examined here, only two, Rāghib and ‘Azzām truly confuse the two, and ‘Azzām seems to have changed his views in his later work (2000).

3.2. Is science fiction not always clearly defined in Arabic-language scholarship?

The other part of Snir's footnote asserts “that science fiction is not always clearly defined...” in Arabic-language scholarship (Snir 2001: 39n181). In his earlier work, Snir writes more: “...as in the West...the definition of SF in the Arabic literary system is not always clear and problems of definition have been raised by a majority of SF writers and critics” (Snir 2000: 267). Although one cannot expect every article to define science

3.2.1. Definitions of science fiction from scholars writing in Arabic

As discussed above in section 3.1.1, Raghib (1981) defines science fiction in such a broad fashion that his definition is virtually useless. However, his definition is clearly stated; there is no confusion regarding how broadly he construes the “scientific novel.” In fact, it is his definition's clarity that allows one to criticize it so easily.

A book-length study of science fiction, Tillāwī 1990, cites a manuscript version of Qāsim 1993 and the definitions given within that work from scholars writing in Arabic and in European languages: Ru’ūf Waṣfī, Magdi Wahba, George Turner, Isaac Asimov, Norman Spinrad, and Roland Lacourbe. However, he eventually decides that a single definition is not possible:

وإذا كنا نقبل محاولات تعريف لأدب الخيال العلمي بتفرعاته، فإن الباحث لا يقبل على الإطلاق وضع تعريف لقصص الخيال العلمي، لأنه ضرب من التجهيل بإمكانات الفن القصصي، وتذكرنا هذه المحاولات بنظرياتها التي حاولت تعريف فن القصة القصيرة -- من قبل -- لدرجة أن حدد بعضهم عدد كلمات وصفات القصة القصيرة؟


If we accept the attempts to define science fiction in all its varieties, then the researcher absolutely cannot accept the imposition of a definition of science fiction storytelling, because it is a sort of stultifying of the possibilities of the narrative art. We remember these attempts in light of those which tried to define
the art of the short story -- previously -- to the point that some of them fixed the number of words and pages in the short story! (Tillāwī 1990: 26-27)

This is not a clear definition, but it is certainly a clear statement of Tillāwī's opinion of a science fiction definition. It also supports Snir's assertion that “problems of definition have been raised by a majority of SF writers and critics” (Snir 2000: 267).

‘Azzām (1994) borrows from al-Shārūnī (1980), partly verbatim:

Science fiction is a type of conciliation between literature and science, or at least a combining and reconciliation between the two of them. In a first stage, the scientists inspired the writers, then they surpassed them, so the writers began, in a following stage, to pursue the discoveries and inventions of the scientists.

(‘Azzām 1994: 9)

This is a clear statement--“science fiction is X”--but perhaps not a terribly clear definition.

Qāsim (1993) reviews the definitions of several scholars who have written in Arabic and in European languages, but settles on a formulation of his own:
I believe that the writer was far off from what can be science fiction. He forgot that science fiction is literature. It is not a precondition that literature be a targeted educational operation. The science fiction writers whom we are reviewing did not intend that their works be educational. We will see in all the all of the examples which we will submit that science fiction is primarily a process of “prediction and hope” of what science might bring in the present or in the near or distant future. (Qāsim 1993: 22)

Qāsim goes on to discuss each of these two key components, prediction and hope, in detail over the next few pages, but he also admits that a more complete definition is not feasible:

ولذلك لن نحاول...أن نضع لأنفسنا تعريفاً جامعاً شاملاً يتضمن ما سيق أن قدمناه من أراء متباعدة حول هذا الأدب...

wa-lidhālik lan nuḥāwil...an naḍa‘ li-anfus-i-nā tārīf-an jāmi‘-an shāmil-an yataḍāmman mā sābaqa an qadam-nā-hu min āra‘ mutabāyina ḥawlā hāḍhā al-adab...

Therefore, we will not attempt...to put in place for ourselves a comprehensive, complete definition that includes what we have previously presented regarding the differing opinions about this literature.... (Qāsim 1993: 27)

Qāsim (1993), like Tillāwī (1990), is pessimistic regarding a true definition of science fiction in all its varieties.

Bahī (1994) proposes a definition that builds on his distinction of science fiction from fantasy:

ولله من المشروع، بناء على هذا، أن نقول أن أدب الخيال العلمي، وإن كان أدبنا خيالياً، فالخيال فيه ليس خيالاً جامحاً أو حراً، لأنه يربط نفسه منذ البداية بحقائق علمية معروفة، أو باكتشافات علمية قائمة أو محتملة (بناء أيضاً على ما هو معروف) ينطبق منها للكشف عن جانب مجهول من الكون أو من الحياة والنفس الإنسانية، محركاً أحداثه في مكان مجهول في الحاضر أو الماضي، أو منطقياً إلى المستقبل...

wa-la‘lla-hu min al-mashrū‘, binā‘ alá hāḍhā, an naqūl inna adab al-khayāl al-‘ilmīyy, wa-in kāna adab-u-nā khayālīyy-an, fa-al-khayāl fī-hi laysa khayāl-an jāmi‘-an aw ḥurr-an, li-anna-hu yurbiṭ nafs-a-hu mundḥu al-bidāya bi-ḥaqā‘iq ‘ilmīyya ma‘rūfa, aw bi-iktīshāfāt ‘ilmīyya qā‘ima aw muḥtamila (binā‘ aydan...
Perhaps it is permissable, building on this, to say that science fiction, if it is fiction, is fiction that is not wild or free, because it has tied itself from the beginning to known scientific facts, or to scientific discoveries that exist or are possible (building also on what is known), proceeding from these to uncover an unknown aspect of the cosmos, of life, or of the human self, its events occurring in a place unknown in the present or the past, or springing to the future. (Bahī 1994: 16)

Sharīf, after reviewing five separate definitions from UK, US, French, and German scholars, proceeds to give his own definition in nine parts with two addenda (1997: 26-27). It is not short, but it is certainly clear. He begins this extended definition with a shorter summary statement:

Sharīf's definition, in both its summary and extended forms, is clear.

Al-Shārūnī 2000, a book-length work on science fiction, uses the same definition he first proposed in al-Shārūnī 1980:

يمكن القول إن أدب الخيال العلمي نوع من المصالحة بين الأدب والعلم الذين يعتقد الكثيرون أن ثمة تعارض بينهما، فأحدهما يقوم على الخيال، بينما الآخر يقوم على أساس التجربة واستقراء الواقع والانههان من ذلك كله إلى قوانين محددة، بل إلى صيغ رياضية كثيرة يمكن大大小يتين أدب الخيال العلمي توفيما بين هذين النشاطين الذين لا غنى للإنسان عن أحدهما، فهو أدب معاصر بكل معنى الكلمة نتيجة التقدم العلمي والصناعي في القرنين

ٍٔٛع ِٓ اٌّٖبٌؾخ ث١ٓ الأكة ٚاٌؼٍُ اٌٍن٠ٓ ٠ؼزمل اٌىض١وْٚ أْ صّخ رؼبهٙب ث١ّٕٙب، ث١ّٕب ا٢فو ٠مَٛ ػٍٝ أٍبً اٌزغوثخ ٚاٍزمواء ا٢فو ٠مَٛ ػٍٝ أٍبً اٌزغوثخ ٚاٍزمواء ا٢فو ٠مَٛ ػٍٝ أٍبً اٌزغوثخ ٚاٍزمواء ا٢فو ٠مَٛ ػٍٝ أٍبً اٌزغوثخ ٚاٍزمواء
It is possible for us to say that science fiction is a type of conciliation [muṣālaḥa مصالة] between literature and science, which many believe are in conflict with one another, as one of the two is based on imagination, while the other is based on experience and the extrapolation of reality according to specified laws, indeed, according to mathematical formulas whenever possible. By this, one can consider science fiction a compromise between these two activities, one of which humanity cannot do without, and that is literature, contemporary in every sense of the word, [which is a] result of scientific and industrial advancement in the past two centuries. So its inclination agrees with the reader because he reads literature connected to the issues of its era, and it opens before him a door to prediction of warnings of the future on the one hand, and its [i.e., the future's] enormous possibilities on the other hand. (87)

3.2.2. Conclusion: Clarity of science fiction definitions in Arabic

Definitions of science fiction in Arabic are as clear as those used in English, that is, they offer a number of options clustering around a few central ideas, such as science, technology, and the future. Scholars are sometimes unable to decide on a single definition. If this is a lack of a clear definition, it is certainly a lack of clarity shared by scholars of science fiction in every language. As Snir (2000) writes, these are problems shared by scholars “in the West” (267).
3.3. Conclusion

It seems that most scholars of science fiction writing in Arabic do, in fact, clearly distinguish fantasy from science fiction. It is also apparent that their definitions of science fiction are as clear as those used in English. One can also conclude from these definitions that they all include some aspects of the prototype definition from the previous chapter. The most commonly shared aspects from the prototype definition are the relationship to science (Qāsim 1993, ʿAzzām 1994, Bahī 1994, al-Ṣḥārūnī 1980, ʿAzzām 2000, Ṣḥārīf 1997, al-Ṣḥārūnī 2000) and extrapolation (Qāsim 1993, Bahī 1994, ʿAzzām 2000, Ṣḥārīf 1997, al-Ṣḥārūnī 2000), though plausibility (Bahī 1994, al-Ṣḥārūnī 1980) and the future (Qāsim 1993, Bahī 1994, al-Ṣḥārūnī 2000) are also mentioned. The fact that most of these aspects are from the rhetorical structure category may indicate that such deep and functional aspects, rather than the more superficial aspects of formal organization or thematic content, are the aspects that translate best or travel best from one language community to another, at least among intellectuals and scholars of science fiction.
4. Generic Cues, Generic Signals, and Schema Headers


These “generic signals” (Fowler 1982), “generic cues” (Frow 2006, 2007), “frame triggers” (Pitkänen 2003), “promptings” (MacLachlan & Reid 1994: 91 quoted in Frow 2005: 109), or “schema headers” (Stockwell 2002) fall into two categories: signals detached from the text, that is, signals in what Genette (1997) calls the “epitext,” and signals attached to the text but not in the text, that is, in what Genette (1997) calls the “peritext.” Using the concepts and terminology developed by Schank & Abelson (1977) and Stockwell (2002), each of these groups of signals equates to a type of schema header: epitextual signals are instrumental headers, and peritextual signals are locale headers. Kassem Kassem's novels *al-riḥla*, *la‘anat al-ghuyūm*, *ḥadaṭha an ra‘ā*, *lamasat al-daw‘*, and *jasad ḥārr* participate in the science fiction genre partly because of epitextual and peritextual generic cues, that is, instrumental headers and locale headers.

4.1. Literary Schemata and Schema Headers

For the purpose of examining generic cues, it is useful to view a literary genre as a type of literary schema. The schema concept is borrowed from cognitive linguistics. Schemata are “mental representations of typical instances” (Cook 1994: 11). The concept
of a schema evolved out of the theory of a “script,” which is “a structure that describes appropriate sequences of events in a particular context” (Schank & Abelson 1977: 41) or “...a predetermined, stereotyped sequence of actions that defines a well-known situation...” (Schank & Abelson 1977: 41). A schema applied to the reading of literature is called a literary schema (Stockwell 2002: 78-79). A literary schema shared among the members of a community of readers and writers, similar to a cultural model (Stockwell 2002: 33-34), is one way to define a literary genre.

4.2. Headers

In order for a schema to be activated, or “instantiated” (Schank & Abelson 1977: 47), in the mind of a reader, the reader must find two or more “headers,” that is, cues (Schank & Abelson 1977; Stockwell 2002, 2003b). In their formative formulation of script theory, Schank & Abelson (1977) postulated four kinds of headers: precondition headers, which are or which mention “a main script precondition” (49); instrumental headers, references to one context or script necessary for another script, such as “food” for a “restaurant” script; locale headers, references to “a time-place locale” with which a given script is usually associated (49); and internal conceptualization headers, “Any conceptualization or role...internal to the script” (50). In formulating “schema poetics,” the application of the theories of Schank & Abelson and other scholars to literature, Cook (1994), Semino (1997), and Stockwell (1994, 2002, 2003b) all cite Schank & Abelson (1977), and they all adopt the header concept generally. However, because so few works have suggested that a Schank & Abelson-type schema can function as a genre, and even
fewer mention headers, no one has specified which kinds of headers correspond to which kinds of generic cues. No one has explained how the four kinds of headers introduced by Schank & Abelson can be used as generic cues.

In fact, three kinds of header--instrumental, locale, and internal conceptualization--correspond well to generic cues contained in epitext, peritext, and text of literary works. Applying these to Kassem Kassem’s novels, one finds that genre cues in the paratext of five Kassem Kassem novels cue the science fiction genre, and some of the cues point to the “heart” of the science fiction genre, prototypical science fiction.

4.3. Epitextual Cues as Instrumental Headers

In Schank & Abelson's (1977) original use of the header concept, an “instrumental header” is a header that activates one script while another is in use:

An IH [Instrumental Header] commonly comes up in inputs which refer to two or more contexts, of which at least one can be interpreted as ‘instrumental’ for the others. For example, in 'John took the subway to the restaurant', both the subway and restaurant contexts would be predicted, since subsequent inputs about either make perfectly good sense. Here, the reference to the restaurant is anticipatory, and the subway is a recognized instrumental means of reaching locales in which more important script goals can be expected to be achieved. In turn, we understand that the restaurant script is in some sense instrumental to the business context in a sentence like 'John went to a business lunch'. An important function of scripts is to provide the background in which more planful activities are carried out. (Schank & Abelson 1977: 49)

Adapting this to the system of schema poetics, an instrumental header is one which activates a literary schema while a different literary schema is already in use. For example, while reading a daily newspaper, if I read a review of a book which calls that book “a wonderful romance,” then I may be predisposed to think of that book as a
romance. That is, the literary schema or genre “romance” will be activated as soon as a
second header appears and activates the same literary schema. Therefore, any generic
cues in the epitext, which is “…any paratextual element not materially appended to the
text within the same volume but circulating, as it were, freely, in a virtually limitless
physical and social space” (Genette 1997: 344), are instrumental headers.

Genette divides the epitext into three categories: publisher's epitext, semiofficial
allographic, and authorial epitext. Within authorial epitext, Genette further distinguishes
public epitext from private epitext. In the category of private epitext, he distinguishes
“confidential” private epitext, “in which the author addresses one (or more rarely,
several) confidant(s)...,” from “intimate” private epitext, “in which the author addresses
himself” (Genette 1997: 372).

4.3.1. Private Authorial Epitext: Correspondence

One type of private authorial epitext is private correspondence. In Genette's
estimation, “…we can use the correspondence of an author (any author) -- and this is
indeed what specialists do -- as a certain kind of statement about the history of each of his
works: about its creation, publication, and reception by the public and critics, and about
his view of the work at all stages of this history” (Genette 1997: 374). Most importantly
for the topic at hand, correspondence may include the author's thoughts on the genre of
his work, either his intentions for it originally or his interpretation of how it evolved
(Genette 1997: 379-380). In fact, these thoughts may be the “function” of the
correspondence, like inscriptions in the peritext of the work itself, if the correspondence
was “directed at critics” and be “meant to guide critics” (Genette 1997: 380), or genre indications may simply be the “effect” of the correspondence, if critics were not the original intended audience of the correspondence: “To the extent that a letter from a writer bears on his work...we may say that it exerts on its first addressee a paratextual function and, more remotely, on the ultimate public simply a paratextual effect” (Genette 1997: 373).

In the case of the correspondence I have had with Kassem Kassem, the genre indications are a function of that correspondence: I asked him which of his novels he considered science fiction, and he answered. Therefore, the first reason to read these five Kassem Kassem novels as science fiction is that the author tells me to read them as science fiction. In an electronic mail message to me dated 30 April 2009, Kassem wrote:

اِب ثقٖٛٓ اٌوٚا٠بد اٌؼٍّ١خ فٟٙ : اٌوؽٍخ ، قلس اْ هأٜ ، ٌؼٕخ اٌغ١َٛ ،ٌَّخ اٌٚٛء ،ٚعَل قبه

amā bi-kuṣūṣ al-riwāyāt al-‘ilmīyya fa-hiya: al-riḥla, ḥadatha an ra’á, la’anat al-ghuyūm, lamasat al-ḍaw’, wa-jasad ḥārr

Regarding the scientific novels, they are: al-riḥla [The Journey], ḥadatha an ra’á [He Happened to See], la’anat al-ghuyūm [The Curse of the Clouds], lamasat al-ḍaw’ [The Touch of the Light], and jasad ḥārr [Hot Body]

The phrase Kassem wrote in his message, al-riwāyāt al-‘ilmīyya 'the scientific novels,' and its singular, al-riwāya al-‘ilmīyya 'the scientific novel,' are used interchangeably with adab al-khayāl al-‘ilmīyy 'science fiction literature,’ al-khayāl al-‘ilmīyy ‘science fiction,’ and riwāyat khayāl ‘ilmīyy 'a novel of science fiction' throughout the secondary literature in Arabic (Snir 2000).\(^\text{15}\)

\(^{15}\) Coincidentally, “science novel” was at one time an accepted term in English for a science fiction novel (see, for example, Taine (1964 [1947])), as was “scientific novel” in French (Evans (1999)).
Other messages from Kassem are less direct but equally informative regarding genre. For example, in a message dated 31 May 2009, Kassem writes to me about the methods he uses to create new vocabulary for his novels. He says that he first looks for existing words in “the world of science fiction,” but if he finds none, he creates new words for the novels. He then gives examples from the novels al-riḥla, la’anat al-ghuyūm, and jasad hārr. Kassem connects “the world of science fiction” to the three novels he cites, linking the genre label to the novels.

4.3.2. Public Mediated Authorial Epitext: Interviews

According to Genette (1997), “When a writer takes the opportunity for an interview -- or vigorously seizes the opportunity provided by one -- to send the public a message truly close to his heart, the genre may function...as an advantageous substitute for a preface” (Genette 1997: 359). The preface for which an interview may substitute, in Genette's estimation, “...has as its chief function to ensure that the text is read properly,” that is, as intended (Genette 1997: 197). An interview, therefore, may be as much a genre cue as a preface or any other feature attached to the text. Indeed, because an interview is embedded in a newspaper or other mass media, it may be the first genre cue a reader encounters regarding a text.

4.3.2.1. Newspaper Interviews

Although it is possible that this earlier usage in English and French influenced Arabic usage, I have found no evidence of this.

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One reason for reading these five novels as science fiction is that Kassem Kassem discusses them as science fiction in the interviews he granted to various newspapers. In each interview conducted with Kassem at the time of the publication of a new novel, the interviewer and Kassem discuss the novel as science fiction. Sometimes, this connection is explicit. For example, in an interview given after the publication of *jasad ḥārr*, Kassem states clearly that *al-riḥla* is a science fiction novel:

...بعدها ولدت رواية الخيال العلمي الأولى (الرحلة)...

...baʿda-hā wulidat riwāya al-khayāl al-ʿilmīyy al-ṭālā (al-riḥla)...

...after it, the first science fiction novel, “al-riḥla,” was born.... (al-Miṣriyy c2004)

Usually, the connection is not explicit. That is, Kassem rarely says, “This novel is science fiction,” as he did in the previous example. Instead, he usually answers questions posed by an interviewer about the novels as science fiction. It is the interviewer who makes the connection explicit. For example, in discussing the novel *jasad ḥārr* (Kassem 2004), the interviewer asks the following question:

جسد حار عنوان لروايتك خيال علمي. ما هو المبرر الروائي لهذا العنوان؟

*jasad ḥārr* ‘anwān li-riwāyat-i-ka khayāl ‘ilmīyy. mā huwa al-mubarrir al-riwāʾiyy li-hādhā al-ʿanwān?

*jasad ḥārr* ['hot body'] is the title of your science fiction novel. What is the narrative justification for this title? (‘Ārif 2004)

Kassem proceeds to talk about his novel and its title. If the application of this genre label had troubled him, it is likely that he would have corrected the interviewer in his answer or disagreed with him or her, as he does with other topics in other interviews (Qaṭāyā 1992, Jarjūra 1993), or the reference to science fiction would have been removed from
the interview altogether. The lack of either indicates Kassem's tacit agreement with the genre that the interviewer has applied to his novel. This tacit agreement occurs in all of the interviews with Kassem that I have been able to obtain. These interviews provide generic cues for al-riḥla (Jāsim Ḥalāwī c1992, Faqīh c1994), jasad ḥārr (al-Miṣriyy c2004, ‘Ārif 2004), and laʿanat al-ghuyūm (Jarjūra 1993, al-Miṣriyy c2004).

A few times in the newspaper interviews, Kassem discusses prototypical features of science fiction within the novels. This is another way he discusses the novels as science fiction, and therefore another way the interviews cue the science fiction genre for those novels. For example, in an interview after the publication of al-riḥla, Kassem comments on elements it contains:

حَارِلةَ، لَا يُقَلِّدُها الأَشْبَاهُ، وَالْفَضْلُ لِمَا دُفِّعَ فِيهَا لِيَغْلُبَّهَا إِلَى الْقُدُصَّ...

ḥāwaltu fī al-riḥla al-safar ilá al-qamar wa-al-mārīkh, maʿ muḥākā tafṣīliyya li-misār markabāt al-faḍāʾ...

I attempted in al-riḥla to travel to the moon and Mars, along with a detailed simulation of the spaceships' trajectory... (Jāsim Ḥalāwī c1992: 42)

The spaceship, as I will discuss in section 5.2, is one of the icons of prototypical science fiction, and “the moon and Mars,” as extraterrestrial settings, are also a prototypical aspect of science fiction (Stockwell 2000: 31). The prototypical science fiction features of the novels Kassem mentions in newspaper interviews function as generic cues for those novels.
4.3.2.2. Personal Interview

Another reason for reading these five novels as science fiction is that Kassem Kassem discusses them as science fiction in the interview he granted me on 4 November 2009. On this date, I interviewed Kassem for just over two hours at his home in Beirut. This interview was public in that Kassem knew the purpose of the interview, that is, to gather data for use in this dissertation. He had granted permission for me to record the interview and use it in my research. It is mediated in that, like all interviews, the interviewer (myself) asked the questions and therefore dictated the course of the discussion. Because we had corresponded about his novels via electronic mail prior to the interview, the generic cues in the interview are primarily of the implicit or tacit kind prevalent in the interviews Kassem granted to newspapers: I asked about his novels as science fiction, and he answered the questions on the novels as science fiction without correcting me.

4.3.3. Public Autonomous Authorial Epitext: Journal Articles

What is true of interviews also holds for other kinds of public epitext, that is, they may act as or contain genre cues. Two other kinds of public authorial epitext Genette mentions are the “auto-review,” a book review by the work's author that concentrates on the meaning of the work, and the “autocommentary,” a similar review by the original work's author, but occurring some time after the publication of the work discussed and concentrating on how the work was created (Genette 1997). These types of epitexts are different from the interview in one important way: these types of epitexts are
autonomous, not mediated, meaning they are “text[s] fully acknowledged by the author, without the participation of an intermediary” (Genette 1997: 353). Thus, they are even more likely to reflect the views of the author and give him or her a chance to produce generic cues for the work, intentionally or unintentionally.16

Like the “auto-review” and “auto-commentary,” a journal article that references one’s own works will produce generic cues for those works. Another reason to read these five novels by Kassem Kassem as science fiction is that he writes about them as science fiction in an article titled al-bī‘a al-zamāniyya wa-al-makāniyya fī adab al-khayāl al-‘ilmīyy. The temporal and spatial environment in science fiction literature’ (Kassem 2008) in the Syrian magazine al-khayāl al-‘ilmīyy. After discussing the rarity of science fiction in the Arab World, Kassem declares, “I will try to read my own experience,” and proceeds to give reasons for the writing of four of the five novels of his discussed here: al-riḥla, ḥadatha an ra‘ā, la’anat al-ghuyūm, and jasad hārr (Kassem 2008: 35-36). After giving these reasons, he again categorizes the novels as science fiction through the question he asks:

wa-dā‘mān ʿātrūḥ al-su‘āl ‘alā nafsī, mā alladhī dafa‘anī ilā kitābat al-khayāl al-‘ilmīyy?

I am always posing the question to myself, “What is it that drove me to write science fiction?” (Kassem 2008: 36)

16 I have been unable to find examples of the autocommentary or auto-review in English. The only references I have found are to texts in or translated from French (Ricci 2003: 124n14) or Sanskrit (Wayman 1961).
The use of the novels as extended examples in an article on science fiction literature and Kassem's comments before and after the examples connecting them to the label “science fiction” are all generic cues pointing to the science fictionality of those novels.

4.3.4. Public Autonomous Authorial Epitext: Lectures

Although Genette does not discuss at length the lecture as a form of epitext, he nonetheless mentions it in passing in a list of public and private authorial epitexts (Genette 1997: 345). It is not surprising that he includes it among the types of epitext: it is as much a work of the author as his or her correspondence or journals, and more so than an interview, given the mediated nature of an interview.

Generic cues for Kassem's novels appear in at least one of his speeches. His address at the June 2007 science fiction symposium in Damascus, “The temporal and spatial environment in science fiction literature,” was later published as Kassem (2008). Therefore, all the cues mentioned above in “Public autonomous authorial epitext: Journal articles” are also found in this address.

4.3.5. “By the same author” lists

Another place in the paratext one can find a genre cue is in the “by the same author” list, usually printed at the beginning or end of a novel (Genette 1997: 99). Although genre indications (discussed below at 2.1) are usually found on the cover of a novel, that is, in the peritext, and a “by the same author” list is certainly peritextual, “[b]y definition, this reminder...should appear only in books other than the one(s) to which it
refers...” (Genette 1997: 99). The list is therefore epitextual with regard to the works it lists. The genre indications found in the list, then, function as generic cues, and specifically as instrumental headers rather than locale headers.

In the five novels examined here, four have “by the same author” lists, titled ṣadara lil-muʾallif ‘published by the author’ (Kassem 1993: 119; 1995: 104; 2001: 88; 2004: 128). Of those four novels' lists, three lists contain science fiction genre indications. First, in the list in laʾanat al-ghuyūm (1993), the novel al-riḥla is labeled a riwāya ʿilmiyya (Kassem 1993: 119). Second, in the list in lamasat al-ḍawʾ, the novels al-riḥla, laʾanat al-ghuyūm, and ḥadatha an raʾā are labeled riwāyāt khayāl ʿilmīyy (Kassem 2001: 88). Finally, in the list in jasad ḥārr, the novels al-riḥla, laʾanat al-ghuyūm, and ḥadatha an raʾā are labeled riwāyāt khayāl ʿilmīyy (Kassem 2004: 128).

4.4. Peritextual Cues as Locale Headers

Like the idea of instrumental headers, the concept of “locale headers” was developed by Schank & Abelson (1977) as part of their theory of scripts. As the name suggests, locale headers are script-activators associated with a place:

Many situations are known to have a ‘residence’, a place or building where they characteristically go on. Indeed, many organizations have distinctively designed buildings (for example, McDonald's Golden Arches) which signal their script to the public. When an understander reads that an actor is in the proximity of such a residence, or better yet, inside the residence, expectations about the occurrence of the script are correspondingly reinforced. (Schank & Abelson 1977: 49)
Adapting this type of header to schema poetics, the locale becomes the physical object in which the work itself is contained along with any indications on or in the object. This is almost exactly analogous to Genette's (1997) definition of “peritext,” text that is situated “around the text and...within the same volume...[including] such elements as the title or the preface and sometimes elements inserted into the interstices of the text, such as chapter titles or certain notes” (4-5). A locale header, then, is a generic cue located within the peritext, a header from this surrounding text and non-text--cover art, for example, could serve as a locale header--that activates a particular literary schema. If, for example, the novel-sized paperback activates a more general “literature” schema, then a specific genre indication on the cover--the word “fantasy” or “horror,” for example--activates the schema for the specific genre, just as McDonald's Golden Arches activate a “fast-food restaurant script,” a specific sort of restaurant script.

4.4.1. Peritextual Genre Cue: Genre Indication

Perhaps the most obvious and direct generic cue in the peritext is what Genette (1997) calls a “genre indication,” that is, a word or phrase, usually on the cover of a work and usually after the title, which states the intended genre of the work. The indication “announce[s] the genre status decided on for the work that follows the title,” the genre status that “the author and the publisher want to attribute to the text” (Genette 1997: 94). As with any generic cue, the reader need not agree with the genre given, but “no reader can justifiably be unaware of or disregard this attribution” (94). In Genette's terms, it is
the “official genre status,” reflecting the “intention” or “decision” of the author and publisher (95).

Of the five Kassem Kassem novels under examination here, four have genre indications on the front cover. On the cover of la’anat al-ghuyūm, the indication is riwāya ‘ilmiyya ‘scientific novel’ (Kassem 1993). On the cover of ḥadatha an ra’ā, the indication is khayāl ‘ilmiyy ‘science fiction' (Kassem 1995). On the cover of lamasat al-daw‘ and jasad ħārr, the indication is riwāyat khayāl ‘ilmiyy ‘a novel of science fiction’ (Kassem 2001, 2004).

One of the five novels examined here, al-riḥla, lacks a genre indication on the front cover. However, it contains a promotional statement on the back cover (“cover 4” in Genette's terminology, see Genette 1997: 25) in which the novel is twice referred to as al-khayāl al-‘ilmiyy ‘science fiction' (Kassem 1990). In Genette's (1997) concept of the genre indication, the indication is not required to be in any given place on or in a work, and one can conclude the terms used in this promotional statement serve as genre indications.

4.4.2. Peritextual Genre Cue: Cover Art

Another location for generic cues in the peritext is in the cover art. Genette mentions that one of the things that may appear on the front cover of a work is a “specific illustration” (Genette 1997: 24), and that such illustrations are part of “localized...iconographic items of information...” (Genette 1997: 24). The illustrations, therefore, function as or contain generic cues in the form of iconography.
Two of Kassem Kassem's novels have cover illustrations that contain these generic cues in the form of science fiction iconography. On the cover of *al-riḥla*, the single illustration is of a small spacecraft, one of the icons common to the two studies of science fiction iconography by Wolfe (1979) and Jones (2003). On the cover of *jasad ḥārr*, a non-humanlike alien is shown, another icon common to Wolfe (1979) and Jones (2003).

A second kind of cue found in the illustrations of one of Kassem Kassem's novels is the setting on the cover of *jasad ḥārr*. First, there are stars set against a dark background, the typical method of showing outer space, and an extraterrestrial or outer space setting is prototypically science fictional (Stockwell 2000: 31; Stockwell 2004: 518). There is also what appears to be a planet with electricity emanating from it. One can interpret this as another reference to outer space, because the viewer may be viewing the planet from outer space, or as a reference to another planet. Either is an extraterrestrial setting.

4.4.3. Peritextual Genre Cue: Author's Name

Another peritextual genre cue on the covers of the novels is the author's name, Kassem Kassem. Although Genette (1997) writes much on the peritextual meaning of the author's name (or anonymity, or pseudonymity), he does not address its value as a generic cue. In fact, it can be a generic cue of great import. For example, if a reader in the United States is given a book without any information about it, and the cover of the book is completely blank except for the author's name, and that name is Stephen King, the reader
will probably assume that the book participates in the horror genre. Similarly, if a reader
in the United States or Europe, given the same circumstances, is handed a book by Isaac
Asimov, the reader will likely assume that the book participates in the science fiction
genre. Although Stephen King and Isaac Asimov have published works in a number of
genres, both fiction and non-fiction, their reputation and identification is such that their
names have become cues for specific genres.

Kassem Kassem's name is a generic cue for four reasons. First, the community of
Arabic science fiction writers and scholars considers Kassem to be a science fiction
author. For example, in al- khayāl al- ‘īlmiyy, a magazine published by the Syrian Ministry
of Culture and composed of science fiction stories, science fiction scholarship, and
science articles, an article describes Kassem as the only Lebanese science fiction writer
number of science fiction stories and novels, and writer of two books on science fiction,
mentions Kassem Kassem by name when he lists science fiction writers from around the
Arab world during an interview with BBC Arabic about science fiction (BBC Extra
2007).

A second reason Kassem Kassem's name is a generic cue is that he is on the
“advisory committee” (الهيئة الاستشارية , al-hay’a al-istişāriyya) of the Syrian science
fiction journal al- khayāl al- ‘īlmiyy. Since becoming a member of the committee would be

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17 In an interview with Kassem after the publication of jasad hārr, an interviewer similarly writes
that Kassem has been “working on the science fiction novel for years alone” (‘Ārif 2004: 52). However,
there are other Lebanese science fiction writers, though Kassem is the only one who has published more
than one work, and the only one known outside of Lebanon. Other writers who identify themselves as
science fiction writers include Māzin ‘Abd Allāh & Ḥaydar Ṣafā, co-writers of ghubār fī al-faḍā’ (2008);
Ghassān Shabārū, author of 2022 (2009); George Abou Zaid, author of la ḥanat al-ard al-ḥaqīyya (2010);
and Samir Chamas, author of ʿind ḥafāt al-kawn (2006). I have met all of them except Chamas.
neither completely Kassem's decision nor completely the decision of others, it is a “mediated” statement of reputation, made jointly by Kassem and the journal. It is therefore both a statement of his reputation and a statement of his self-identification. The advisory committee itself, in addition to Kassem, includes Nihād Ṣharīf, a science fiction author and scholar from Egypt who has been writing science fiction since 1972, and the first to write science fiction exclusively (‘Azzām 2000: 25; al-Ṣārūnī 1997); Ṭība al-Ibrāhīm, a Kuwaiti writer of science fiction (BBC Extra 2007; Kassem 2008); ‘Abd al-Salām al-Baqālī, a Moroccan writer of science fiction (‘Azzām 2000: 25); and Kawthar Ayed, a Tunisian scholar who has written about Arabic-language science fiction in both French (Ayed 2005, 2006) and Arabic (Ayed 2009). All of these writers and scholars identify or are identified primarily in relation to science fiction in Arabic.

A third reason Kassem Kassem's name is a generic cue is because he has spoken at a number of science fiction conferences held in the Arab World. Like participation in the advisory committee of al-khayāl al-‘īmiyy, lecturing at the conferences is a joint decision of the conference organizers and Kassem himself, making it a sort of mediated opportunity. Of the four science fiction conferences held in the Arab World since 2006, Kassem has spoken at three of them: in June 2007, he delivered a lecture at a science fiction symposium in Damascus on the characterization of the temporal and spatial environment in the science fiction novel (Aljamal.com 2007); in April 2009, he spoke at a meeting in Tunis on the paucity of science fiction in Arabic (Akhbar.tn 2009); and in August 2009, he spoke at a symposium in Damascus on the adaptation of science fiction to the Arab context (al-Na‘ma 2009).
A final reason that Kassem Kassem's name is a generic cue is that he identifies himself publicly and primarily as a science fiction author. On his Facebook profile webpage, in the “write something about yourself” box, in which a Facebook participant can introduce himself or herself in any way, Kassem identifies himself first as an author of science fiction:

كَاتِب خُيَّال عَلْمِيّ مِن لِبْنَان لَدِي عِدَّة مُؤِلَفَات صَادِرة عَن مِكتِبَة بِيسَان بِيِروت، وَهِيُ: الْخِبازِي زِمْلَةُ الْخُطْوَ، الرَّجْلَةُ،

kātib khayāl ‘ilmīyy min lubnān līday ‘iddat mu’allafāt ṣādara ‘an maktabat bīsān bayrūt, wa-hiyya: al-khabbāzī za[‘ic]-al-makhtūf, al-riḥla, la’anat al-ghuyūm, ḥadatha an ra’ā, būḥ al-ṣābā, al-mightas, lamas[‘at al-daw’]


Although he lists both his science fiction and non-science fiction works, he identifies himself only as a “science fiction author.” This is the primary public identity Kassem has chosen. Therefore, science fiction is the genre most likely cued by the appearance of his name.

4.5. Conclusion

The paratext of five novels by Kassem Kassem examined in this dissertation contains headers, that is, cues, that instantiate the science fiction genre. Cues in the paratext that is physically separate from the novels, the epitext, are equivalent to Schank & Abelson's (1977) concept of instrumental headers. The epitext in which they may be found for these novels includes correspondence, interviews, journal articles, lectures, and
“by the same author” lists. Cues in the paratext attached to the novels' text, the peritext, are equivalent to Schank & Abelson's (1977) concept of locale headers. These peritextual cues include genre indications, the author's name, and prototypical science fiction iconography in the cover art.

In addition to paratextual cues, a third kind of header proposed by Schank & Abelson (1977), the “internal conceptualization header,” is part of the activated script rather than prior to it. Schank & Abelson's original definition is brief: “The fourth kind of header is the Internal Conceptualization Header (ICH). Any conceptualization or role from a script may occur in a text” (1977: 50). However, despite the brevity of its definition, this type of header is the easiest to integrate into schema poetics. It is “any reference to elements or activities that are centrally part of the schematic content...” (Stockwell 2003b: 256), that is, something, be it object, “action or role” (Stockwell 2002: 78), from a literary schema itself. In the case of prototypical science fiction, the presence of features of the thematic content, formal organization, or rhetorical structure would serve as such a header. These features are the focus of the remainder of this dissertation.
5. Thematic Content

One broad category in which one can group certain prototypical features is thematic content. By “thematic content,” Frow (2005) means “the shaped human experience that a genre invests with significance and interest” (75). This human experience centers around typical “actions,” which range from “one-off events” to “world-historical occurrences” (76), and “actors,” which “will be recognisable characters, human or non-human, belonging to the genre’s more or less limited repertoire of character-types” (76). More specifically, thematic content can be demonstrated through “a set of topoi, recurrent topics of discourse, or as a recurrent iconography” (75; bold in the original). These “actions and actors form a world with a particular organisation of space and time...”, a world that is “always, and by definition, generically specific” (76).

An iconography of science fiction was originally proposed by Gary K. Wolfe in an essay (1977) and a book (1979). Although Damien Broderick further developed the idea of science fiction iconography and proposed a larger science fiction “megatext” (1992, 1995), a “vaster web of interpenetrating semantic and tropic givens or vectors” based on “over fifty years..of mutually imbricated s[cience] f[iction] texts” (Broderick 1995: 59), it is Wolfe's original concept that has had the most lasting influence, and it is his more limited number of icons that is most appropriate in addressing prototypical science fiction rather than the larger science fiction genre. It is also a limited number of icons, not a much larger megatext, that Jones proposes in a more recent essay (2003).
5.1. Scholarship on Science Fiction Iconography

Two authors have directly addressed the topic of science fiction iconography. The first, Gary K. Wolfe, wrote an essay titled “The known and the unknown: Structure and image in science fiction” (1977), which he later expanded into a book-length study, *The known and the unknown: The iconography of science fiction* (1979). In his book, Wolfe writes that “a few images familiar to any science-fiction reader (and to most nonreaders as well) have developed into ‘icons’ (1979: ix), and that these icons are “representative of the fundamental beliefs and values that the genre explores” (1979: 16). Wolfe names a total of five icons, which he places in two broad groupings: Within “images of environment,” Wolfe lists the icons of the spaceship, the city, and the wasteland, while in “images of humanity,” he lists the icons of the robot and the monster. Wolfe devotes a chapter to each icon, discussing different aspects of the icons, such as the “the city as Babylon” (86) and “spaceships as self-contained societies” (61), as well as various manifestations of each icon, such as “the transformed human” and “the alien” within the monster icon. In a manner similar to Frow’s (2005) description of the structural dimensions of genre, Wolfe (1979) notes that “many of these icons overlap and merge in certain works” (xiv).

The second author to address the topic of science fiction iconography is Gwyneth Jones. Jones wrote an essay for *The Cambridge companion to science fiction* titled “The icons of science fiction” (2003) in which she defines science fiction icons as “the signs which announce the genre, which warn the reader that this is a different world; and at the same time constitute that difference” (163). Apparently unaware of Wolfe’s earlier and
much longer work, Jones proposes a number of icons and groupings of icons that are similar, though not identical, to those proposed by Wolfe. In four categories, Jones introduces about ten icons. In the first section, Jones lists “rockets, spaceships, space habitats, [and] virtual environments” as four icons. In the second section, Jones lists robots, androids, and “gynoids,” a neologism of her own creation that refers to androids that resemble females, either as three separate icons or three sub-types of one icon, the artificial being. In the same section, she names “cyborgs” as an icon, but this icon seems to include not only human-machine hybrids, the usual meaning of “cyborg,” but also genetically engineered or enhanced humans. Finally, in this second section, Jones includes aliens as an icon, “the 'other beings' icon--the intelligent extraterrestrial” (168).

In the third section, Jones names “the alien planet” (169), both its natural environment and the culture of its inhabitants, as an icon. In the fourth and final section, Jones concentrates on the “set of stock figures” (171) in science fiction: the “young male adventurer” (171) and the “desirable female” (172), often remembered as “the diaphanously clad damsel on the cover” (172) of the science fiction pulp magazine.

As each scholar has tried to extract the essential icons from the science fiction genre, the concepts shared by the two seem to be the most essential icons, the icons at the heart of the genre--the prototypical icons. In examining Wolfe (1979) and Jones (2003), one can derive four shared icons. These shared icons are the spaceship, the alien, the transformed human, and the robot.

18 The distinction between Jones introducing a new icon and developing one previously mentioned is not always clear.
5.2. The Spaceship

5.2.1. The Icon of the Spaceship

One of the icons that both Wolfe (1979) and Jones (2003) propose is the icon of the spaceship. Each scholar observes different aspects of the icon’s use, form, and nature. According to Wolfe (1979), the most prevalent uses of the spaceship are those in which “the interior is the abode of life, society, and comfort, while the outside suggest the confrontation of the unprotected individual with stark nature” (60). He proceeds to examine science fiction works of this kind, which he terms “‘domestic' spaceship” stories, “stories in which the point of view is initially confined to the interior of the ship” (61), as opposed to “the 'alien' spaceship story, in which the point of view is initially confined to the exterior of the ship...” because this type of story “is generally less common in science fiction...” (61). Jones (2003), however, observing the same inside-outside dichotomy, sees the domestic spaceship story and the alien spaceship story sharing common traits: “...the spaceship (whether it carries colonists or invaders, or hides monsters in its secret depths) is an alternative, contained world in itself” (164). One kind of story can even be changed to the other: “...the assumption that danger lies in the abyss outside the spaceship's metal shell can be reversed to great effect,” as was the case in the film Alien (165).

Another aspect of the spaceship icon about which Wolfe (1979) and Jones (2003) hold different opinions is the very form and meaning of “spaceship.” Jones (2003) distinguishes the rocket from the spaceship. The rocket, “with its upward thrusting phallic shape and dramatic flight,” is a separate icon, and the term can be used in the context of weaponry or in the context of a craft that departs from the Earth and achieves space
flight, “a symbol of escape to the stars” (164). The spaceship, on the other hand, is “designed not for experimental parabolas but for exploration, for freight and passenger transport and for long-term occupation” (164). The two icons are different in form as well as function: “The finned, phallic cone has been replaced by the spaceship” (164). Finally, the two icons occupy different periods in the development of science fiction: “In sf itself...the rocket...has long been superseded” (164). Jones is not specific about when this changeover occurred, but her use of the term “postwar” (164) suggests that World War II was the switching point.

Unlike Jones, Wolfe (1979) neither distinguishes two separate icons nor does he suggest one image was more prevalent than another in the historical development of science fiction. In fact, he seems to dismiss the rocket's critical importance altogether. However, in dismissing the rocket, he admits its popular, and therefore prototypical, importance:

The popular notion of a phallic shape--and the resulting popular misconception of a phallic meaning for spacecraft--seems to have derived partly from Verne's use of a conical projectile fired from a huge cannon and partly from the design of the earliest atmospheric rockets, which of course were not designed to go into space at all, much less carry passengers. Of course, this shape was widely featured in illustrations of the 1940s and 1950s, in films such as Destination: Moon (1951), and in the design of our own early multistage manned rockets, but there is little real evidence to suggest that it has ever been as purely Freudian an image as some might suggest...” (Wolfe 1979: 60)

Whether a “popular notion” is actually a “misconception” is irrelevant as far as its prototypicality is concerned. In fact, Wolfe's discussion seems to reinforce the prototypical form of the rocket and its synonymity with the spaceship. A rocket, then, is one prototypical form of a spaceship.
5.2.2. The Icon of the Spaceship in Kassem Kassem's Novels

Spaceships appear in all of Kassem Kassem's novels. In his earliest novel examined here, *al-riḥla* (1991), the opening line of the first page is a section heading in bold print:

«صحن طائر» يهبط في حديقة المنزل

«شاّن تاّير» يابعّت في حانقات منزل

A “flying saucer” lands in the yard (Kassem 1991: 5)

The “flying saucer” is the prototypical shape of an alien spacecraft appearing on Earth in the “popular UFO mythology” Wolfe mentions in passing (1979: 61), and one might initially expect that such spacecraft will appear in the novel. However, the quotation marks are key to understanding Kassem's use of the phrase. Five lines later, the narrator says that the craft is *ustuwāniyyat al-shakl* ‘cylindrical in shape' (Kassem 1991: 5), a description much more like a rocket than a saucer. Although it does indeed bear aliens, the spacecraft is not saucer-shaped. Thus, Kassem initially uses one prototypical spacecraft shape, the saucer, to signal to the reader that there will be aliens and, probably, that this is a science fiction story, then uses another prototypical spacecraft shape, the rocket, to reinforce the science fictionality of the scene. At the same time, this spaceship is for long-distance travel and exploration, features Jones (2003) associates with non-rocket-shaped spaceships.

The spacecraft bearing aliens in *al-riḥla* also initially acts in the manner typical for Wolfe's “alien spaceship story,” with spacecraft seen only from the outside and aliens
emerging periodically from those spacecraft. However, once the four main (human) characters board the alien spaceship to begin the titular journey to the moon and other planets, the spacecraft becomes their temporary home and the story more like a “domestic spaceship” story, the interior of the spaceship becoming the known realm. Indeed, at one point, the boys transfer to a smaller spacecraft, al-markaba al-faḍā’iyya al-saghīra the small spacecraft' (1991: 45), and refer to their larger craft as al-markaba al-umm the mother craft' (1991: 45). However, unlike the “domestic spaceship” story as it is described by Wolfe (1979), little is written about the interior of the ship. Instead, this spaceship is primarily a means to transport the protagonists from one planet to another. Nonetheless, the spaceship fulfills its iconic purpose.

In Kassem’s second novel examined here, la'anat al-ghuyūm (1993), two kinds of spaceship appear. The smaller kind, called a markaba craft, boat,' is used by the main characters in their battle with the clouds of pollution. The two designs of this craft presented in the novel seem to have a crew of one or two, but can carry at least four persons from the Earth to the Moon. The second and more advanced craft, referred to at one point as a markabat al-talawwuth pollution craft’ (80) and designed specifically to fight the eponymous clouds, is described in technological detail, including its heat-resistant ceramic construction, its Rolls-Royce engine, and solar power for its electronic equipment (Kassem 1993: 89). Internally, little is described in the craft beyond lawhat al-qiyāda dashboard, kursiyya chair, seat,’ and zīr button.' The size, the sparse internal description, and the detailed design specifications make these two types of craft seem more like fighter aircraft than large ships, and few of the ideas from
Wolfe or Jones seem to apply to them save the “confrontation...with stark nature” (Wolfe 1979: 60).

The other kind of spaceship that appears in la’anat al-ghuyûm is different from the first kind in a number of ways. First, rather than being called a markaba, it is referred to as a safîna سفينة 'ship,' suggesting a larger craft. Second, it is used as, and referred to as, al-safîna al-umm السفينة الأم 'the mother ship' (Kassem 1993: 73) because smaller spacecraft dock with it and launch their missions from it. Finally, and most importantly, the single ship of this sort in the novel has a name: al-samâ’ al-zarqâ‘ السما الزرقاء 'The Blue Sky' (Kassem 1993: 43, 106). These three aspects lead one to conclude that this spaceship is an example of the “spaceship-as-sea-vessel” metaphor that Wolfe (1979) discusses: “Many of the spacecraft in early science-fiction illustrations were clearly modifications of sea-going vessels, and the notion of the 'space liner' or 'space freighter'--both suggesting ocean craft--was a staple of pulp-era space opera” (Wolfe 1979: 60).

Wolfe's mention of the pulp era is key because, like many features of that era's science fiction, the “spaceship-as-ship” metaphor has become prototypical. One of the main reasons for this is its use in the Star trek television programs, in which spaceships are effectively naval vessels, and the Star wars films, where naval vessels are joined by, for example, a freighter. One of the most important aspects of this “shipness” is the naming of the spaceships in the manner of terrestrial sea vessels, the Enterprise and the Millennium Falcon surely being the most famous examples from Star trek and Star wars, respectively.
In the novels following _la’anat al-ghuyūm_, spaceships and spacecraft assume a more secondary role. In _hadatha an ra’á_ (1995), for example, both the terms _safīna_ and _markaba_ are used, but only in the context of a conversation (23), a daydream (67), or being seen on television (49) or a closed-circuit viewing device (17-18, 53). In the same way, in _lmasat al-ḍaw’_, the only spaceships that are referenced are the one in which Sāmī was traveling during his deep-space mission when it was lost, and the one that will return Ibn al-Qamar and Nāhid to the University of the Moon at the end of the novel (Kassem 2001: 86). Similarly, in _jasad hārr_ (2004), one of the few appearances of a spaceship, named _al-ahlām_ 'The Dreams,' is brief and without details of the ship itself:

The spaceship _Dreams_ was on the verge of take-off when it received the journalist Jamīla al-Nahār as the representative of the space agency. The trip commander welcomed her and allocated to her a place befitting her. Then the ship launched on a trip, its stations spread out between the Earth and the moon.... (Kassem 2004: 125).
The immediate experience of the spaceship is almost entirely absent; the spaceship has been reduced to a primarily iconic function.

5.3. The Alien

5.3.1. The Icon of the Alien

Another image shared by Wolfe (1979) and Jones (2003) is that of the alien. Again, the two scholars do not agree completely. For Jones (2003), the alien is a science fiction icon, which she also calls “the 'other beings' icon” (168). Its primary function is to provide an “image of otherness” (169), and thus fuel stories of how to deal with otherness: “...competition and conflict...” (169) or “...pit[y] [or] admir[ation]” (168), among other options. However, because the ideas of the form of probable alien life have evolved in science, and therefore science fiction, from that of the intelligent extraterrestrial to less anthropomorphic, less sentient possibilities, Jones (2003) suggests that the icon's original functions may soon be assumed by “humanoid grotesques” (168), future iterations of transformed humanity.

For Wolfe (1979), the alien is only a type of monster icon, “an image of the unknown that generates initially a nonrational response” (186), rather than being a separate icon. However, this difference in categorization may not be as substantial as it initially seems. For example, the functions Wolfe (1979) attributes to the monster icon are nearly the same as those Jones (2003) attributes to the alien icon. The first function is otherness: “To be human, the science-fiction writers tell us, is to be surrounded by alien forces and unknown factors, by creatures and things that are clearly not human and that
yet somehow survive and grow” (Wolfe 1979: 185). The second function is the nature of interaction with otherness: “Nonhuman life is one of the key images of the unknown in science fiction, and the ways in which people interact with it and are reminded of their own humanity (or 'humanness') by it constitute one of the genre's most enduring and fascinating themes” (Wolfe 1979: 185).

Another way Wolfe's (1979) idea of the alien is similar to Jones' (2003) icon is a shared aspect of intelligence. Wolfe (1979) specifies that he means “intelligent aliens” rather than “animal monsters” (201) when he mentions aliens. Jones (2003) likewise uses the phrase “intelligent extraterrestrial” (168) when writing about “the 'other beings' icon” (168). However, each author's reason for including this characteristic is different. For Wolfe (1979), “intelligent aliens” (168) are typical because “...in most science fiction on this theme, the focus is on the unique abilities and technology of the alien civilization rather than on the animal nature of the aliens themselves” (201). For Jones, the intelligence of the alien is tied to the purpose of the icon, that is, “...competition and conflict...” (169), “...pit[y] [or] admir[ation]” (168), or something similar that can be evoked most easily by an intelligent being. Rather than including aspects of “alien civilization” within this icon, as Wolfe (1979) does, Jones places alien culture alongside alien natural environments within a separate icon of alien places (Jones 2003: 169-170).

Because Wolfe's treatment of the alien is longer than Jones', he is able to address fully some characteristics mentioned by Jones only briefly. One such characteristic is the form of the alien. Jones writes that “aliens...remain[ed] monstrous invaders in the movies” in the 1960s (2003: 168), implying that they had also been monstrous in print in
an earlier period, and that they have been “more recently...conveniently humanoid” (168). She also opines that, with the apparent decreasing probability that intelligent aliens will be found, the dominant alien form in science fiction will likely become something non-sentient.

Wolfe similarly mentions the monstrous images common to some science fiction literature, many science fiction films, and much science fiction art, as well as the explanations (or pretexts) of scientific extrapolation used to justify the images. However, he continues his analysis of alien form by discussing five ways that some science fiction authors, intent on concentrating on ideas, have avoided the distraction of monstrous imagery: the aliens take over human bodies (203); the aliens take human form (203); the aliens “never reveal...[their] form to humans at all, but rather communicate through robots or other means,” such as animals (203-204); the aliens are not extraterrestrial, but are instead created by “impacting natural intelligence to familiar animals, either through mutation or through discovery of their secret 'language’” (204); or the author “simply describ[es] the alien in terms antithetical to conventional monster imagery,” using, for example, terms that make the alien seem “cute” (204). Given the equal time Wolfe spends on intelligent aliens’ monstrous and non-monstrous forms, it is difficult to determine which might be said to be prototypical in Wolfe's view.

Yet another similarity between the interpretations of Jones (2003) and Wolfe (1979) is that, just as Jones (2003) treats the alien and different versions of humanity in the same section, Wolfe (1979) makes aliens and “transformed humans” two subcategories of the icon of the monster. However, while Jones (2003) sees transformed
humans replacing aliens as the most useful “image of otherness” as the chances of finding intelligent alien life fade (Jones 2003: 168-169), Wolfe (1979) considers the icons of the alien and the transformed human different degrees on a continuum: “If the alien or monster conceptualizes an 'I-Thou' relationship with the unknown, with mankind facing a choice of either conquering or being conquered by it, the transformed human conceptualizes mankind's rite of passage into the unknown” (Wolfe 1979: 208-209).

5.3.2. The Icon of the Alien in Kassem Kassem's Novels

The first and clearest example of the alien icon in Kassem's novels appears on the first page of text in the earliest novel examined in this dissertation, al-rihla (1991). Initially referred to as makhlūqat 'beings' (Kassem 1991: 5) and later as rijāl al-fadā’ ‘spacemen,' their appearance is described early in the novel, an appearance that seems human enough to be familiar, but different enough to establish their “alienness”:

I stared at their shape. While it was closer to the shape of monkeys than to the image of a human, what distinguished them from it [i.e., the shape of monkeys] was their erect stance on two legs, like that of a human, in addition to their...
copious hair which covered the visible skin, despite their silver-colored leather clothing which covered most of their body. His face was covered by a glass ball which they removed when they entered our house. It revealed a face with a large nose, a round mouth, and two small eyes and ears. (Kassem 1991: 5-6)

Despite the comparison to monkeys, it is also established quickly that they are more technologically advanced than Earth civilization: they arrive in spaceships (Kassem 1991: 5), they have traveled to Earth from a planet in another solar system (Kassem 1991: 6), and they speak “our language,” which, from the writing the main characters read on signs once on the Moon, seems to be Arabic (Kassem 1991: 6, 54). They are certainly “intelligent,” a key characteristic of aliens cited in both Wolfe (1979) and Jones (2003).

It is the aliens' civilization, however, and not their form that provides the reader with the most important “image of otherness” and the protagonists' most significant interaction with that otherness. And the end of the novel, the journey brings the young human protagonists to the aliens' planet al-mīzān, where the civilization is technologically impressive but ultimately revolting to the humans. Noting that everyone seems to look and dress alike, “as though we were in China” (Kassem 1991: 77), and the smiles of the local young women were that of “the resident to the visitor” (77), the main character laments his inability to talk with them and decides that “there is no time to waste on them” (77). The lack of areas to relax seems to push him to a more final judgment of the society:

ٌُٔب٘ل ِمبٟ٘، أٚ ؽلائك ػبِخ، ٚػٕلِب ٍؤٌٕب ػٓ اٌَجت، عبء اٌغٛاة : إٕٔب ّؼت ػٍّٟ.

We did not see cafés or public parks, and when we asked about the reason, the answer came: We are a working people. (Kassem 1991: 77)
After this, the main character decides he understands the people of *al-mīzān*, whose “fundamental concern, as they informed us, is work and production” (77): “They live in a whirlpool of technology, which has become their life,” meaning that “they are not like us” (77). At the end of the novel, the main characters reject this “civilization immersed in technology” (79) and look forward to their return to Earth. Sāmī does not even feel alive in this environment:

وَلَمْ احْسَسْ بِقَلْبِي يَبْضُ بِحِرَارَةٍ، أَلَا عِنْدَمَا وُطَنَّتْ أَقْدَامُي أَرْضٌ كُوَكْبَيْنَا

wa-lam aḥuss bi-qalbī yanbiḏ bi-ḥarāra, illā ‘indamā waṭa’at aqdāmī arḍ kawkab-nā.

I did not feel my heart beat until my feet touched the ground of our planet. (Kassem 1990: 77)

Unlike most of the “first contact” stories mentioned in Wolfe (1979: 205-209), the humans in *al-riḥla* are not spurred, frightened, or shamed into developing a technology equal to or greater than that of the aliens. Instead, it seems the humans want only to return to their own planet and civilization, perhaps desiring “the warm, comfortable, womblike nature of the earth” that Wolfe contrasts with “the alien” (Wolfe 1979: 205). If the alien civilization is an example of the image of otherness that the icon of the alien is supposed to provide, then the rejection of that otherness is an example of the interaction with otherness that the icon is also supposed to provide.

The second and somewhat less clear example of the alien icon in the novels of Kassem Kassem is that of the *al-aḍwā’* ‘the lights,’ also called *aṣdiqā’ al-faḍā’*

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19 In the novel as it was printed, the hamza in the word *waṭa’at* ‘touched’ is seated on a yā’ and therefore spelled وَطَنَّت. In my copy of the novel, Kassem made a pen-and-ink correction, placing the hamza on an alif seat. I have reproduced the word as corrected.
space friends,' faḍā′iyyūn 'spacers, space people' or rijāl al-faḍā′ 'spacemen.' First appearing in hadatha an ra′ā (1995), these lights can only be seen by Ibn al-Qamar, the son of Sāmī and Jamīla al-Nahār and the main character of hadatha an ra′ā (1995) and lamasat al-ḥaw′ (2001) whose name is not revealed until the beginning of the latter novel. However, others can detect them when, for example, they move objects (1995: 69). In form, the lights are described as having thalāthat ajsām shafāfa 'three transparent bodies' (1995: 52), and the mouth of one is described as “seeming like the opening of a video” (1995: 41). A crude drawing of the three lights, in which they are portrayed as little more than blotches, is the only in-text illustration in the novels (1995: 38).

The lights are less clear examples of the alien icon not because of their form, but because their origins and nature are obscure. Although they are presented as “spacemen” and reference is made to their otherworldliness—they do not understand pain, sickness, or death (Kassem 1995: 40, 60-61)—and to their observation of humanity from afar (2001: 32), vague references in hadatha an ra′ā (1995) and overt references in lamasat al-ḥaw′ (2001) and jasad ḥārr (2004) tell us that at least one of the lights is a transformed Sāmī, Jamīla al-Nahār's husband and Ibn al-Qamar's father, who was lost on a deep space exploration mission sometime between the events of la′anat al ghuyūm (1993) and hadatha an ra′ā (1995). It is never made clear to the reader from where these lights came, though there are references to “the fourth dimension” (1995: 38), nor is it clear what they are, though “stringed beams of light” is one description they give (38). Most importantly, while other characters can see their actions, only Ibn al-Qamar can actually
see the lights themselves, suggesting that they may not necessarily exist or that they may
be manifestations of Ibn al-Qamar's powers.

5.4. The Transformed Human

5.4.1. The Icon of the Transformed Human

A third icon shared by Wolfe and Jones is that of “the transformed human,” to use
Wolfe's term (1979: 208). As with the image of the alien, the icon of the transformed
human is not specifically an icon for Wolfe, but is instead another type within the icon of
the monster. For Jones, it seems to be a separate icon, that of “post-humanity” (2003:
167) or “post-human speciation” (2003: 168) resulting from genetic engineering or the
melding of humans and machines. Wolfe (1979) discusses its meaning:

The anthropological and psychological literature on such tales of transformation is
immense, and the common factor in interpretations of such tales is that they are
somehow involved with the passage from one state of being to another, from
ignorance to knowledge. Transformation is almost universally a passage into the
unknown, the crossing of a barrier that broadens and deepens the scope of
experience. In science fiction, transformations are no less significant, but have
characteristically been treated in terms of empirical rather than visionary
experience.... (Wolfe 1979: 210)

Both Jones (2003) and Wolfe (1979) focus on the deliberate alteration of human by
technological means for the purpose of space exploration or survival on other planets
(Jones 2003: 168; Wolfe 1979: 208-215), but only Wolfe (1979) also examines
“mutations” and “the mutation story” which “alters humans in such a way that they are
alienated from their own environment and forced to perceive it in a new way” (209).
Specifically, he concentrates on the telepath, “the most common image of mutant humans
in science fiction” (216), often as “the societal outcast, the next step in evolution, who is regarded as a 'monster' by 'normal' humans” (216).

For both Wolfe and Jones, one purpose of the icon of the transformed human, like the icon of the alien, is to present an “image of otherness” (Jones 2003: 169). However, while the two icons serve similar purposes for Jones (2003), they are different degrees on a continuum for Wolfe (1979), as discussed above (section 5.3.1).

5.4.2. The Transformed Human Icon in Kassem Kassem's Novels

In Kassem's novels, there are two manifestations of the transformed human. One of these is the transformed Sāmī, the main character in al-riḥla (1991) and laʿanat al-ghuyūm (1993). As early as laʿanat al-ghuyūm, Kassem hints that there is something abnormal about Sāmī. At the very beginning and the very end of the novel, electrical devices around Sāmī lose their charge or do not function (1993: 5-6, 116-117). In the following novel, hadatha an raʿā (1995), it is established that the loss of electrical charge in a battery is a sign that al-adwā’ 'the lights,' aliens whom only Ibn al-Qamar, the son of Sāmī and Jamīla al-Nahār, can see, have been present (1995: 51). In this same novel, a few statements from Jamīla al-Nahār suggest she believes that those lights are manifestations of Sāmī, though there is no confirmation of this from the lights themselves. Finally, in lamasat al-dawʾ (2001), it is confirmed that one of the lights is, in fact, a transformed Sāmī. This fact is further addressed in jasad ḥārr (2004).

The second manifestation of the transformed human in Kassem's novels is Ibn al-Qamar. The son of Sāmī and Jamīla al-Nahār, Ibn al-Qamar is born on the last page of
la’anat al-ghuyūm (1993). He is the main character of ḥadatha an ra’ā (1995) and lamasat al-daw’ (2001), in which the character’s name is revealed, and a secondary character in jasad ḥārr (2004). The qualities that make him a “transformed human” are revealed in ḥadatha an ra’ā (1995). In that novel, it is established that Ibn al-Qamar has perception beyond that of a normal human, allowing him to see al-aqwā’ الأضواء ‘the lights’ (Kassem 1995: 64), to see all lights better (Kassem 1995: 67), to provide unique perspectives on physics-related problems (1995: 23-26, 54-55, 74-76), and to conceive of additional theoretical dimensions (33). These extraordinary abilities stem from his mādda mukhtalifa مادة مختلفة “different substance” (39), that is, “different from the substance of the inhabitants of Earth” (39). The precise source of this “different substance” is not made clear to the reader. The lights tell him that he is their child (1995: 38), but it is not clear if this is meant literally or figuratively, nor is it clear whether Sāmī's nature is a factor, nor is it clear whether his birth on the moon is a factor. In a review of jasad ḥārr (2004), Mardān (2004) points out that Ibn al-Qamar “is able, for reasons the author did not make clear, to see his father embodied as light...” It seems that this assessment applies to all of the novels in which Ibn al-Qamar appears. In terms of Wolfe’s (1979) categories, one can safely say that Ibn al-Qamar is closer to the mutant category: Whatever his nature, it is not a result of anything humans did intentionally.
5.5. The Robot

5.5.1. The Icon of the Robot

A fourth icon shared by Wolfe and Jones is the icon of the robot. In Wolfe (1979), a chapter is devoted to the icon of the robot. In this chapter, Wolfe describes the varied roles of robots in science fiction and how “science fiction spends a great deal of time speculating on these tools, on what their relationship is to us, and on what their 'true nature' is” (151). These roles and relationships include “rebellious machines” (151); “the misused tool” (157); “the human imperative” (164), that is, the replacement of humanity by machines in both form--the android--and function; and “the re-creation of humanity” (174), the theme of superior machines re-creating humanity after its extinction.

Jones (2003) similarly describes the robot icon's forms and functions. According to Jones, the two iconic forms of the robot are that of “Robby, the metal-box-bodied, google-eyed good servant in the 1956 film Forbidden Planet...” (166) and “the perfected 'intelligent machine' [which] will have a human or quasi-human form” (167). In terms of its iconic roles (and distinct from its forms), the robot is first “the good servant” who is “innocent but...may still destroy us,” a dual natured being pioneered in and epitomized by the writings of Isaac Asimov (167). The second role, associated more with robots who “have a human or quasi-human form,” is as a “futuristic underclass...defined and devalued by their artificiality” (167).
5.5.2. The Robot Icon in Kassem Kassem's Novels

This icon is conspicuously absent in the works of Kassem Kassem. Although computers appear in the novels, none of these has any autonomy of thought or movement, nor do they have any prototypically robotic form, neither “Robby-like” nor humanoid. Instead, computers in the story seem to have the features of a modern personal computer or industrial computer. A single possible exception in the novels is a reference in *la'anat al-ghuyūm* to a combination aircraft and spacecraft called *al-rūbūt* - 10 الروبوت - 10. The Robot - 10' that can “fly without a navigator,” use energy from “the small waves emanating from the Earth,” and “fly in the air throughout the seasons of the year without being supplied with a drop of fuel” (Kassem 1993: 86). However, despite its name, it is unclear from the context whether it is meant to be an autonomous vehicle with some sort of artificial intelligence, a remotely controlled vehicle, or something between the two. It also lacks the iconic humanoid form of the robot. In any case, its primary purpose seems to be to establish the credentials of the spacecraft design scientist's assistant, Rīm, rather than comment on humanity or artificial intelligence.

A clue to Kassem's reasons for excluding robots from his novels might be found at the end of *al-rihla*. Noting the absence of “cafés, or public parks” (77) on the aliens' planet *al-mīzān*, and soon realizing that “they live in a whirlpool of technology, which had become their life” (77), Bāsil, one of the protagonists, concludes with a metaphor: *innahum ālāt* إِنْهُمْ آلَاتٌ “They are machines” (79). Almost immediately afterward, Sāmī,
the main character and narrator of the novel, thinks the last line of the book in an internal dialogue:

وَلَمْ اَحْسَنْ بَيْلِي عِنْبَس بِحَرَارَةٍ، اَلَا عِنْدَمَا وَضَأْتَ اَقْدَامٍ اَرْضٍ كُوْكِبٍ

wa-lam aḥuss bi-qalbī yanibd bi-ḥarāra, illā ‘indamā waṭa’at aqdāmī arḍ kawkab-nā.

I did not feel my heart beat until my feet touched the ground of our planet. (Kassem 1990: 77)

Kassem has associated the “workaholic” aliens with machines, and has associated machines with working without respite, something inhuman in a negative sense. To work without cafés and public parks is not only inhuman, it is less than sentient: Only a being without a soul, a machine, would live such a life. In this estimation, a robot is like a human whose humanity has been removed.

Another clue is a simile in ḥadatha an raʿā where the main character moves bi-ḥidhr ka-rajul āliyy ‘cautiously, like a mechanical man’ when he feels ill and in pain (1995: 93). “Robotity” is thus associated with being impaired.

Similarly, in an interview in ‘Ārif (2004), Kassem says that characters in science fiction are rūbūtiyya ‘robotic’ (2004: 52). In this interview, Kassem pairs that adjective with another, musaṭṭaha ‘flat,’ and in other interviews, he describes science fiction characters using the term musaṭṭah exclusively (al-Miṣriyy c2004).

The lack of robots, then, may be related to Kassem’s aversion to the essence of “robotity,” that is, something that looks like a human but lacks humanity, as the inhabitants of al-mīzān lack non-work-related activities, and the flat characters of typical

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20 See footnote 19 in section 5.3.2.
science fiction lack characterization or depth. Robots, perhaps, are the epitome of a
“civilization drowning in technology” (1991: 79), as Kassem describes the society of the
alien planet al-mīzān, for a robot is the technological replacement for a human.

5.6. Conclusion

“[T]he shaped human experience that a genre invests with significance and
interest” is the genre's “thematic content” (Frow 2005: 75), and one way that content can
be demonstrated is through “a recurrent iconography” (75; bold in the original). If the
icons common to the two major works on science fiction iconography, Wolfe (1977) and
Jones (2003), are the prototypical science fiction icons, then those prototypical icons are
the spaceship, the alien, the transformed human, and the robot. All five of Kassem
Kassem's novels studied in this dissertation contain the spaceship icon, while none of the
five contains the icon of the robot. The icon of the alien is found in all of the novels
except la‘anat al-ghūyūm (1993). The icon of the transformed human is found in lamasat
al-daw' (2001) and jasad hārr (2004) in the characters of Ibn al-Qamar and Sāmī, and in
ḥadatha an ra'ā (1995) in the character of Ibn al-Qamar alone. However, ḥadatha an
ra'ā (1995), as well as the first two novels, al-riḥla (1991) and la‘anat al-ghūyūm (1993),
contain hints that Sāmī is or will become a transformed human.
6. Formal Organization: Pulpstyle Features

Another broad category in which one can group certain prototypical features of a genre is formal organization. By formal organization, Frow (2005) means “the repertoire of ways of shaping the material medium in which it [i.e., the genre] works and the ‘immaterial’ categories of time, space, and enunciative position” (74). In a written genre, the “ways of shaping the material medium” are primarily textual and may include a “specialised vocabulary” (8), “the organisation of...the layout of printed pages, or of the properties of grammar and syntax (for example, the degree of complexity of sentences, and the way they play off against metrical units)” (74), and even “such basic choices as whether texts in the genre are normally long or short...” (74). For “the ‘immaterial’ categories of time, space, and enunciative position” (74), the shaping tools are discursive and relate to register, that is, “certain kinds of tone and certain effects of verisimilitude: the presentation of the text is in a ‘literal’ or a ‘figurative’ mode, its manner is elevated or modest or somewhere in between, and a certain kind of subject matter corresponds to these stylistic choices” (74), and to deixis, “the shaping of the temporal and spatial relations of the projected world, the quality and duration of actions, and the relation between the central narrative ‘voice’ or perspective and the figure of the author, on the one hand, and the represented world on the other, which in turn sets up a certain temporal relation between the present of narration and the narrated time” (74).

Most of these methods of shaping the material and immaterial media correspond to features of prototypical science fiction. These formal features, according to Stockwell (2000), were established in the style and form of U.S. science fiction magazines of the
1920s and 1930s. Stockwell (2000) calls these features “pulpstyle,” following Taylor (1990).\footnote{Whereas Taylor (1990) uses the term pulpstyle to refer to almost any science fiction written before the New Wave began in about 1963, Stockwell (2000), following Nicholls (1993a), Asimov (1974), and other scholars, distinguishes the pulpstyle period from the “Golden Age” that began in 1937.} There are six such pulpstyle-derived features:

1. A short-story format
2. Plainly descriptive titles
3. A pattern in the names of characters
4. The creation and use of neologisms
5. Third person narrative focalized through a single main character
6. A military-scientific register

In addition to these pulpstyle-derived features, prototypical science fiction also shapes “the ‘immaterial’ categories of time, space, and enunciative position” (74) through the use of particular types of deixis in order to establish three prototypical science fiction features: the future setting; the extraterrestrial setting; and the non-human character.

6.1. Prototypical Formal Features from Pulpstyle

“Pulpstyle” is the term Stockwell (2000) uses to refer to the features of science fiction published from the 1920s to the late 1930s in the United States in low-cost magazines “printed on cheap paper manufactured from chemically treated wood pulp...” (Nicholls 1993e: 979).\footnote{Although pulp magazines of various genres were published from the 1880s through the 1950s (Nicholls 1993e), “pulp science fiction” usually refers to the science fiction published in specialized science fiction magazines of the 1920s and 1930s. Stockwell (2000) focuses on this period, but borrows Taylor's (1990) use of a 1945 short story to demonstrate pulpstyle features.} This particular kind of science fiction, written quickly for an
audience of adolescent boys and recent immigrants (Stockwell 2000: 79, 99), is characterized by “the 'neutral' narration of a clearly explained and plausible science fictional scenario” (Stockwell 2000: 78) as well as specific formal patterns in story length, titles, character names, neologism use and formation, “narrative focalisation” (83), register, “lexical variation” (88), “lexical co-reference and repetition” (89), and “thematic repetition” (90). As the pulp period gave way in the late 1930s to the “Golden Age” of science fiction (Asimov 1974; Nicholls 1993b), and the number of science fiction magazines declined in the 1940s and 1950s, all but the last three of these features were retained in the remaining magazines (Stockwell 2000: 100-101). Similarly, in the growing number of science fiction novels, all but the last three and, of course, the length were retained. Collectively, the features shared by pulpstyle, Golden Age style, and the remainder of the “magazine era” (Attebery 2003) constitute the “traditional style” of science fiction (Stockwell 2000: 100-101)–the prototypical style. Most science fiction is still written in this traditional style (Stockwell 2000: 78). New science fiction movements that do not fully use the traditional style, such as New Wave and cyberpunk, nonetheless write in conscious contrast to that traditional science fiction style (Stockwell 2000: 104-105; Taylor 1990), often “shifting focus within the pulpstyle pattern...” (Stockwell 2000: 102).

6.1.1. Short-story format

According to Stockwell, “...the short story can...be regarded as the prototypical format for science fiction...” (2000: 139; 2004). By “format,” Stockwell means three
separate aspects of the short story: (a) the short-story length; (b) being published with other works in a larger work, such as a magazine or anthology, rather than alone; and (c) a type of internal organization characterized by “a single novum and resolution rather than a complex plot development” (2000: 100) or “problem-resolution patterns” and “characters [that] tend to be ciphers or types” (2004: 519). The first two aspects, length and publication category, will be addressed here because they relate to the “shaping of the material medi[a]” (Frow 2005: 74).

The first relevant prototypical feature, length, was established in the pulp science fiction magazines, not only by “the single-issue short story,” but also by “serialised episodes which can be gathered together into a 'fixup' novel of sorts” (Stockwell 2000: 77), though it is the stand-alone short story that became the lasting prototypical structure. While it is difficult to determine with precision the length of the prototypical science fiction short story, for the purposes the Science Fiction Achievement Award and the Nebula Award, annual literary awards for science fiction, a short story is defined as a work of less than 7,500 words (Nicholls 1993c, 1993d).

The second relevant aspect, the type of publication, is more clearly defined: A short story is published with other similar works in a larger publication, while a novel is published separately, as a single work. Although a novel can be divided into separate “chunks” for serialized publication, it is no longer called a “novel” when this occurs. On the other hand, a short story is rarely published as a separate work.

It is clear that Kassem Kassem's novels do not possess these aspects of the prototypical short-story format. First, none of the novels is less than 14,000 words: al-
rihla has about 17,000 words; la’anat al-ghuyūm about 14,500 words; ḥadatḥa an ra’ā about 14,214 words; lamasat al-ḍaw’ about 17,266 words; and jasad ḥārr about 15,240.

Second, the five novels examined here were all published as novels, that is, as self-contained works. Moreover, each novel was published with the word riwāya ‘novel’ on the cover or the spine.

6.1.2. Titles

The titles of pulpstyle works have particular functions and forms. In terms of form, a pulpstyle title usually consists of a noun and a “modifier,” which may be as short as a single word or as long as a prepositional phrase (Stockwell 2000: 81). The phrase may include a verb as long as the phrase remains subordinate to the noun and does not cause the noun-modifier combination to become a sentence (2000: 81). In terms of function, “Pulp titles are unambiguously related to the content of the story, having a similar function...to the sort of newspaper headline which would be most familiar to the typical pulp writer” (2000: 81). These “prosaic” and “plainly descriptive” titles are “like an abstract or digest of the story that follows” (2000: 81, 80). Examples from an anthology of 26 pulpstyle stories compiled by Isaac Asimov (1974), a version of which is cited by Stockwell (2000), include “The man who awoke” (1974: xii) and “The human pets of Mars” (1974: xiii). The function and form of pulpstyle titles were retained in the post-pulp period, where they became part of Golden Age form and thus part of the prototype (Stockwell 2000: 100).
Of the five Kassem Kassem novels examined here, three follow the noun-plus-modifier pattern. The most recent novel, *jasad hārr* 'Hot body,' has the most easily recognized configuration of the pattern, a noun plus an adjective. Two novels have titles formed using noun-noun annexation, *la‘anat al-ghuyūm* لعنة الغيوم 'The curse of the clouds' and *lamasat al-daw* لمسة الضوء 'The touch of the light.' In Arabic, noun-noun annexation functions as a genitive construct, the second element taking possession of the first and thus modifying it.

Two of Kassem's novels do not follow the prototypical pattern. The first novel's title is simply a definite article and a noun, *al-riḥla* الرحلة 'The journey.' This is not the usual format for prototypical science fiction titles, but it is not very far from it. Indeed, Asimov's (1974) anthology includes two titles that are single nouns, “Colossus” (xii) and “Devolution” (xiii). On the other hand, another Kassem novel does not fit any of the prototypical forms for a title. The title of the third novel, *ḥadaθa an ra‘ā* حدث أن رأى 'He happened to see,' fits better with titles from the New Wave period, titles that include verbs (Taylor 1990). Two examples of New Wave titles are *Do androids dream of electric sheep?* (Dick 1968) and “I have no mouth, and I must scream” (Ellison 2009 [1967]). Like these New Wave-period titles, *ḥadaθa an ra‘ā* is itself a complete sentence rather than a disconnected noun phrase.

In terms of function, two of the novels can be said to have “plainly descriptive” and “prosaic and non-evocative” titles (Stockwell 2000: 80, 81). The title of the first novel, *al-riḥla* الرحلة 'The journey,' is a short description of the novel's plot. The title of the second novel, *la‘anat al-ghuyūm* لعنة الغيوم 'The curse of the clouds,' describes the
main element of that novel, a cloud that menaces Earth. This title is also very much like “The accursed galaxy,” originally published in 1935 (Asimov 1974: xiii).

Three of Kassem's novels have titles that do not follow the functional pattern. The title of the third novel studied here, hadatha an ra’ā حديث أن رأى 'He happened to see;' refers obliquely to one part of one element in the novel, that is, the main character's ability to see al-adwāء الأضواء 'the lights,' but it does actually mention the lights themselves, the implied object of the sentence, nor does it clearly state who has this ability, the implied subject of the sentence. This is not plainly descriptive or prosaic. The title of the fourth novel, lamasat al-dawء لمسة الضوء 'The touch of the light,' suggests a primary plot point, that the transformed Sāmī can bring people back from the dead yet cannot show his wife that he is still alive, but it is not plainly descriptive. Finally, the title of the fifth novel studied here, jasad ḥārr جسد حار 'Hot body,' also refers only to an element of an element, Jamīla al-Nahār's feeling when one of the lights from outer space is nearby (Kassem 2004: 15) More symbolically, it refers to “the reinvigoration of her body, to become hot, vibrant...” (Kassem quoted in ‘Ārif 2004: 52) as Jamīla restarts her life years after the loss of her husband, Sāmī. Each title refers to a secondary element in the story that only suggests the main story. Therefore, these titles do not follow the prototypical pattern, and while they may still suggest science fiction to the reader, they cannot be said to help instantiate or evoke the prototypical science fiction schema in the mind of the reader.
Table 6.1 - Titles of Kassem Kassem’s Novels

<table>
<thead>
<tr>
<th>Novel Title in Arabic</th>
<th>Novel Title Transliterated</th>
<th>Translation</th>
<th>Grammatical Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>الرحلة</td>
<td>al-rihla</td>
<td>The journey</td>
<td>Definite article + noun</td>
</tr>
<tr>
<td>لعنة الغيوم</td>
<td>la’anat al-ghuyūm</td>
<td>The curse of the clouds</td>
<td>Noun-noun annexation</td>
</tr>
<tr>
<td>حدث أن رأى</td>
<td>hadathā an ra’ā</td>
<td>He happened to see</td>
<td>Sentence</td>
</tr>
<tr>
<td>لمسة الضوء</td>
<td>lamasat al-daw’</td>
<td>The touch of the light</td>
<td>Noun-noun annexation</td>
</tr>
<tr>
<td>جسد حار</td>
<td>jasad ḥārr</td>
<td>[A] hot body</td>
<td>Noun + attributive adjective</td>
</tr>
</tbody>
</table>

6.1.3. Character Names andNaming

In pulpstyle, human protagonists' names are “usually...common Anglo-Saxon, Irish, or Scottish names...” (Taylor 1990: 613), reflecting both the heritage of most of the authors, “young white men,” and the milieu in which the stories were being written, “American cities of the [U.S.] east coast” (Stockwell 2000: 81). Aliens, however, are given “names with consonant clusters that tend not to occur in the English phonological system, as an index of their alienness” (Stockwell 2000: 82). Thus, “foreignness and exoticness” become equivalent to “alienness” (Stockwell 2000: 82), an ethnocentrism that suggests the more overt racism found elsewhere in pulpstyle works (Taylor 1990: 613; see also Le Guin 1993: 94).

This pulpstyle naming pattern became a feature of prototypical science fiction. Stockwell finds it in anthologies that include stories from the 1940s through the early 1960s (2000: 100). In a study of U.S. science fiction short stories from 1949 and 1959, Plank (1961) found that 81% (17 of 21) of the heroes and 71% (22 of 31) of the heroes'
friends had Anglo-Saxon names, while villains had Anglo-Saxon names only 35% (6 of 17) of the time and “foreign” or “out-of-the-world” names 65% (11 of 17) of the time (Plank 1961: 154-156). More generally, Plank found that Anglo-Saxon “names are by far the largest category” of all characters' personal names (1961: 154), and that almost 10% (12 of 124) of the characters were unnamed in the stories, though all the heroes were named (Plank 1961: 155).

Kassem Kassem has adapted some of this traditional naming scheme to the Arab milieu. Rather than Anglo-Saxon, the majority of character names are common Arab names. Indeed, 20 of the 23 separate character names in the five novels are among the 13,783 most common names in the Arab World compiled in the Dictionary of Arab names (al-Zubair, et al. 1991). Even names from the novels not found in the Dictionary of Arab names are often very close to names that are included in that dictionary: Ibn al-Qamar is very much like Ibn Qamar, and al-Nahār is similar to Nahār and al-Nahāriyy (al-Zubair, et al. 1991: 1416, 1783). One newspaper review of la’anat al-ghuyūm asserts that the characters' names, including Jamīla al-Nahār, are sā’ida wa-ma‘rūfa معلوم ومعروفة 'current and known' (al-Ruzz 1993).

However, Kassem has apparently dispensed with the remainder of the traditional science fiction naming scheme. The only character with a name of recognizably non-Arab origin, Indira (إنديرا), is an Indian scientist allied to the protagonists of la’anat al-ghuyūm, rather than an enemy or alien of extraterrestrial origin. In Plank's (1961) terminology, the character is a “friend of the hero,” a category of character most often given a name of Anglo-Saxon origin (Plank 1961: 154-155). Also, although there are no “villains” in the
nations, the characters closest to playing that role, representatives in the delegations from the United States, Europe, Japan, and other polluting countries from *al-manātiq al-shamāliyya* ‘the northern areas’ (Kassem 1993: 80) to the climate conference held on the moon in *la’anat al-ghuyūm*, are not named, avoiding the equation “foreignness equals enemy,” at least in characters' names. Finally, the aliens in *al-rihla*, *hadatha an ra’ā*, *lamasat al-ḍaw*’ and *jasad ḥārr* are unnamed.

Table 6.2 - Named Characters in Five Kassem Kassem Novels

<table>
<thead>
<tr>
<th>Character name in Arabic</th>
<th>Character name transliterated</th>
<th>First appearance of name in novels</th>
<th>Entry in Dictionary of Arab names (al-Zubair, et al. 1991)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>سامي فايد</td>
<td>Sāmī Fāyid</td>
<td><em>al-rihla</em>, page 41</td>
<td>Sāmī: Pages 771-772 Fāyid: Page 1306</td>
<td></td>
</tr>
<tr>
<td>شوقى سعيد</td>
<td>Shawqī Saʿīd</td>
<td><em>al-rihla</em>, page 41</td>
<td>Shawqī: Page 968 Saʿīd: Pages 806-807</td>
<td></td>
</tr>
<tr>
<td>مروان شاهين</td>
<td>Marwān Shāhīn</td>
<td><em>al-rihla</em>, page 41</td>
<td>Marwān: Pages 1584-1585 Shāhīn: Pages 891-892</td>
<td></td>
</tr>
<tr>
<td>جميلة النهار</td>
<td>Jamīla al-Nahār</td>
<td><em>la’anat al-ghuyūm</em>, page 8</td>
<td>Jamīla: Page 343 al-Nahār: N/A “al-Nahār” not found in Dictionary of Arab names, but close to “Nahār” and “al-</td>
<td></td>
</tr>
<tr>
<td>Character name in Arabic</td>
<td>Character name transliterated</td>
<td>First appearance of name in novels</td>
<td>Entry in <em>Dictionary of Arab names</em> (al-Zubair, et al. 1991)</td>
<td>Notes</td>
</tr>
<tr>
<td>--------------------------</td>
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<td>-------------------------------------------------------------</td>
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</tr>
<tr>
<td>شاھین رمأل</td>
<td>Shāhīn Ramāl</td>
<td><em>la’anat al-ghuyūm</em>, page 23</td>
<td>Shāhīn: Pages 891-892 Ramāl: Page 683</td>
<td></td>
</tr>
<tr>
<td>اندرآ</td>
<td>Indīrā</td>
<td><em>la’anat al-ghuyūm</em>, page 75</td>
<td>N/A</td>
<td>Non-Arab name and character</td>
</tr>
<tr>
<td>ریم</td>
<td>Rīm</td>
<td><em>la’anat al-ghuyūm</em>, page 86</td>
<td>Page 705</td>
<td></td>
</tr>
<tr>
<td>منیر</td>
<td>Munīr</td>
<td><em>hadatha an ra’ā</em>, page 8</td>
<td>Page 1686</td>
<td></td>
</tr>
<tr>
<td>ناھد</td>
<td>Nāhid</td>
<td><em>hadatha an ra’ā</em>, page 9</td>
<td>Page 1730</td>
<td></td>
</tr>
<tr>
<td>نائلة</td>
<td>Nā’ilah</td>
<td><em>hadatha an ra’ā</em>, page 9</td>
<td>Pages 1717-1718</td>
<td></td>
</tr>
<tr>
<td>فؤزی</td>
<td>Fawzi</td>
<td><em>hadatha an ra’ā</em>, page 31</td>
<td>Page 1351</td>
<td></td>
</tr>
<tr>
<td>فادی</td>
<td>Fādī</td>
<td><em>hadatha an ra’ā</em>, page 34</td>
<td>Page 1299</td>
<td></td>
</tr>
</tbody>
</table>

Nahārī” (al-Zubair, et al. 1991: 1416, 1783); Kassem discusses origins of his choice of this name in ‘Ārif (2004: 53); one reviewer of jasad ḥārr (2004) writes after first mentioning this name, yā li-shā’irīyyat al-ism! 'Oh, the poetic power of the name!' (Mardān 2004).
<table>
<thead>
<tr>
<th>Character name in Arabic</th>
<th>Character name transliterated</th>
<th>First appearance of name in novels</th>
<th>Entry in <em>Dictionary of Arab names</em> (al-Zubair, et al. 1991)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ابن القمر</td>
<td>Ibn al-Qamar</td>
<td><em>lumasat al-ḍaw'</em> , page 7</td>
<td>N/A</td>
<td>Literally, “The son of the moon” because he was the first person born on the moon (Kassem 2001: 25); Not found in <em>Dictionary of Arab names</em>, but close to “Ibn Qamar” (al-Zubair, et al. 1991: 1416)</td>
</tr>
<tr>
<td>شاكر</td>
<td>Shākir</td>
<td><em>lumasat al-ḍaw'</em> , page 10</td>
<td>Page 886</td>
<td></td>
</tr>
<tr>
<td>Character name in Arabic</td>
<td>Character name transliterated</td>
<td>First appearance of name in novels</td>
<td>Entry in Dictionary of Arab names (al-Zubair, et al. 1991)</td>
<td>Notes</td>
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<td>-------------------------</td>
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<td>----------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>سامي الطيار</td>
<td>Sāmī al-Ṭayyār</td>
<td>jasad ḥārr, page 7</td>
<td>Sāmī: 771-772, al-Ṭayyār: 1077</td>
<td>This is the same character called “Sāmī Fāyid” in <em>al-rihla</em> and simply “Sāmī” in ḥadatha an raʿā and laʿanat al-ghuyūm. It seems that Kassem intends for al-ṭayyār ‘the pilot’ to function as Sāmī’s surname. This may be an instance of a science fiction “author creat[ing]...a society having a systematic nomenclature indicative of rank, occupation or other characteristic” (Krueger 1966: 210) as part of an effort “to add verisimilitude” (Krueger 1966: 205). At the same time, Kassem chose a name that is found in the <em>Dictionary of Arab names</em>.</td>
</tr>
<tr>
<td>فايد</td>
<td>Fāyid</td>
<td>jasad ḥārr, page 75</td>
<td>Page 1306</td>
<td></td>
</tr>
</tbody>
</table>

6.1.4. Fictive Neology

6.1.4.1 Fictive Neology in Science Fiction

Another prototypical science fictional feature derived from pulpstyle is the use of “fictive neology,” the term Csicsery-Ronay (2008) uses to include both neologisms, that
is, new words, and “neosemes,” a neologism Stockwell (2000) coined to refer to existing words that have been given a new meaning. In pulpstyle, neologisms, rather than neosemes, are the dominant aspect of fictive neology (Stockwell 2000: 82). They are “fairly meaningless derivations” (Stockwell 2000: 134) used to “disguise...gaps in scientific knowledge” (Stockwell 2000: 82). Pulpstyle neologisms have “sources [that] are almost always in the hard sciences of physics, chemistry, biology and materials engineering” and “tend to have referents which are material and technical: physical objects rather than abstract concepts” (Stockwell 2000: 82).

The neologism has become one of the most recognizable features of prototypical science fiction. Scholars disagree on the typical number of neologisms in a science fiction work, with estimates ranging from “...maybe half a dozen...in the 'hardest' of 'hard' science fiction novels” (Stockwell 2000: 117) to one hundred or more in a single novel (Spruiell 1997). In any case, there are certainly “more than are encountered in mainstream literature” (Stockwell 2000: 117).

The methods authors use to form neologisms in science fiction are as varied as those that occur naturally in the course of language change. Yule (2006) lists the nine available word-formation processes in English: coinage; borrowing; compounding; blending; clipping; backformation; conversion; acronyms; and derivation through the use of affixes (Yule 2006: 52-59). Coinage is “the invention of totally new terms” (53), such as “zipper” or “kleenex” (53). Borrowing is “the taking over of words from other languages” (54). Borrowing can be direct, such as piano from Italian and pretzel from German, or through loan translation, such as superman from the German Übermensch.
Compounding is “a joining of two separate words to produce a single form” (54), such as fingerprint from finger and print, or textbook from text and book (54). Blending is “[t]he combination of two separate forms to produce a single new term,” but is “typically accomplished by taking only the beginning of one word and joining it to the end of the other word” (55). For example, the second part of the word “alcohol” and the first part of the word “gasoline” are combined to form “gasahol,” and the first two letters of the word “smoke” are combined with the last two letters of the word “fog” to form the word “smog” (55). Clipping is “when a word of more than one syllable...is reduced to a shorter form...” (55), such as gasoline being called “gas,” or a facsimile being called a “fax” (55). Backformation is when “a word of one type (usually a noun) is reduced to form a word of another type (ususally a verb)” (56), such as “television” being reduced to form the word “televise,” or “liaison” being reduced to form “liaise” (56). Conversion is “a change in the function of a word, as for example when a noun comes to be used as a verb (without any reduction)” (56), such as the noun “butter” becoming the verb “to butter” (56) or the noun “vacation” becoming the verb “to vacation” (56). Acronyms are “new words formed from the initial letters of a set of other words” (57), such as the word “laser” from “light amplification by stimulated emission of radiation” or the word “radar” from “radio detecting and ranging” (57). The final word-formation technique Yule (2006) lists is derivation through the use of affixes, such as the addition of a prefix to the word “happy” to form the word “unhappy” (57), or the addition of the suffix “-ish” to the word “fool” to form the word “foolish” (58).
Similarly, Stockwell (2000) lists the methods he found of neologism formation in science fiction. These are creation, borrowing, derivation, compounding, and shortening, with which Stockwell includes backformation and acronyms (2000: 123-131). In Stockwell's opinion, there is no one method of neologism formation that is prototypical for science fiction. On the contrary, “Science fiction seems to have a greater spread of types of neologism [than mainstream fiction, which relies primarily on creation], with lots of examples of borrowing, derivation, compounding, and shortening, as well as creations of both proper nouns and common nouns for new objects” (133). However, prototypical science fiction is based on pulpstyle, and pulpstyle relies on the hard sciences (Stockwell 2000: 82). Hard science fiction, a sub-genre of science fiction focused on the hard sciences and descended from the traditional style of the pulp and Golden Age periods, will likely “feature a greater concentration of borrowings, derivations and compounds of the single word and multiple-word lexical item types,” such as “wormhole,” “nanotechnology,” and “Dyson sphere,” because “[t]hese are the sorts of neologisms you find in scientific discourse” (Stockwell 2000: 133, 127-128, 133). Therefore, because it draws from the same source material, prototypical science fiction likely also features a similar concentration of certain neologism types.

As with pulpstyle neologisms, the referents of prototypical science fiction are typically substantive. That is, the topics of neologism creation are not generally actions or descriptions, but rather “new concepts and things...” (Stockwell 2000: 118), often “new inventions” (117). For this reason, prototypical science fiction neologisms are primarily nouns. Indeed, Westfahl (1992), though he includes neosemes in his definition of
neologism, finds only 8 verbs out of 328 neologisms in the 4 pulp and Golden Age works that he examines, while he finds 295 nouns. Spruiell (1997), though he does not examine works older than 1965 and examines only neologisms formed through the process of coinage, finds only 6 verbs among 474 neologisms in 10 works. Both Westfahl (1992) and Spruiell (1997) acknowledge the “preponderance of nouns” (Westfahl 1992: 223) or their “predominance” (Spruiell 1997: 446).

6.1.4.2. Fictive Neology in the Novels of Kassem Kassem

Kassem Kassem's novels demonstrate this feature of prototypical science fiction. However, Kassem avoids creating single words in favor of creating “multi-word lexical items,” a “very common” method even in English-language science fiction, according to Stockwell, who gives examples such as “suspended animation,” “generation ship,” and “space warp” (Stockwell 2000: 128). This is an even more common method of neologism formation in Arabic than it is in English. Although all of the possible methods for the formation of new single words in English have equivalents in Arabic, the frequent creation of new terminology through translation from European languages has left a mark on written Arabic. The practice of al-istiqāq bi-al-tarjama 'derivation by translation' has resulted in the “composite neologism,” as Stetkevych (2006) terms it, becoming common in Arabic, “particularly in the modern Arabic language of science and technology” where “such neologisms gain the widest currency” (34-37). It is therefore unsurprising that an author seeking to give his writing “the flavour of a scientific register” (Stockwell 2000: 128) would use this kind of neologism.
Kassem constructs composite neologisms in three ways. Most often, Kassem uses phrases composed of a noun and an attributive adjective, such as al-hātif al-mar‘īyy المطمم المرنى 'the visual telephone' (Kassem 1993: 115) or al-ma‘t’am al-tā‘îr المطعم الطائر 'the flying restaurant' (Kassem 2001: 28). In other cases, two nouns are placed together in an annexation construction, often combining the word jihāz جهاز 'device' with a verbal noun, such as jihāz al-tabā‘thur جهاز التباعثر 'the disruption device' (Kassem 1993: 45). Finally, there is a single instance of a pseudo-affix placed before a noun to construct the neologism nānū thāniya نانو ثانية 'nanosecond.' This word, taken from the English “nanosecond,” seems to be an example word formation through multiple processes: the first part of a word, nānū نانو 'nano,' is borrowed from the English prefix “nano,” while the second part of the word, thāniya ثانية 'second,' is a loan translation of the English “second.” The word nānū thāniya was apparently so new or unknown in Arabic when Kassem used it in jasad ḥārr that he felt it necessary to insert a footnote containing its definition:23

(1) nānū thāniya: juz’ min milyūn, miqyās al-waqt al-murtabiţ bi-al-anţama al- alaktrūniyya.

(1) nanosecond: part of a million, the time measurement associated with electronic systems. (Kassem 2004: 23)

Finally, many of the neologisms Kassem creates are found in la‘anat al-ghuyūm. This is perhaps because neologisms are used primarily for “new concepts and things...” (Stockwell 2000: 118), and la‘anat al-ghuyūm, as the most technology-laden of the

23 Another reason for the footnote may have been that footnotes are a scientific custom, and their use therefore reinforces the scientific plausibility of the story.
novels, has the most new “things.” In later works, Kassem is generally content to use
to use more general or previously established terms, such as the aforementioned *sayyāra*
*ṭā’ira* 'flying car.' Still, there are exceptions. The neologism *al-маъ‘ al-ṭā’ir*
*الطيار* 'the flying restaurant,' for example, appears first in *lamsat al-daw’* (2001: 28), his fourth science fiction novel, and the *nānū thāniya* appears again in *jasad ḥārr* (2004: 23), his fifth science fiction novel.

6.1.5. Narrative Focalization

6.1.5.1. Narrative Focalization in Science Fiction

A fourth feature of pulpstyle that has become a feature of prototypical science
fiction is its “narrative focalisation” (Stockwell 2000: 83): “Like newspaper journalism
and scientific reporting, pulp writing is almost always in the third person with an
apparently objective and often omniscient narrator, “though “[o]ccasionally it is in the
first person...” (Stockwell 2000: 83). In either case, “it is always the WASPy human
character through whom the action is focalised...” (Stockwell 2000: 83). In many cases,
“The focalisation...is effected...through a high density of direct speech” because it “has
the effect of seeming to minimise the apparent narrator's control over the narrative”
which “makes the science fictional universe seem much more like a narrative unfolding
in the real world than an artificial fictional story” (Stockwell 2000: 84). At the same time,
that direct speech is “non-naturalistic” in “the...complexity of...the syntax” because its
“purpose...is to establish the framing episode, characters and their history quickly”
(Stockwell 2000: 84).
Like the short-story format, titles, character naming, and the use of neologisms, narrative focalization became part of the Golden Age style, and, therefore, part of the prototype (Stockwell 2000: 100). Stockwell (2000) also notes the feature's presence in post-Golden Age novels, further reinforcing its prototypical status (102).

6.1.5.2. Narrative Focalization in the Novels of Kassem Kassem

Kassem Kassem's earlier novels have strong aspects of this feature, but the last two have less of it. In *al-rihla*, *la‘anat al-ghuyūm*, and *ḥadatha an ra‘ā*, the narration is in the first person, that person being Sāmī Fāyid in *al-rihla*, Sāmī in *la‘anat al-ghuyūm*, and Sāmī's son, Ibn al-Qamar, in *ḥadatha an ra‘ā*, though Ibn al-Qamar remains unnamed until the following novel. Although this is not the third-person narration that is “most” prototypical, the events nonetheless remain fully focalized on that one character.

In his two later novels, *lamasat al-daw’* and *jasad ḥārr*, Kassem abandons this feature. While he wrote these two novels using a third-person omniscient narration, the key aspect of the feature, the focalization on a single protagonist, is not present. Instead, the focalization shifts from one main character to another. In *lamasat al-daw’*, the narration sometimes follows Ibn al-Qamar, but at other times follows Jamīla al-Nahār or others. In *jasad ḥārr*, the narration initially focuses on Jamīla al-Nahār, but switches on page 27 to focus on Sāmī, who has returned as a form of light. The novel then alternates between focalization on Jamīla al-Nahār and the light throughout the novel.

Although this indicates a move away from the prototypical feature, it is not an unusual change among modern science fiction works written in the traditional style.
According to Stockwell (2000), even among works written in the traditional, prototypical style derived from pulpstyle, “Most evolution out of pulpstyle seems to be within the dimension of narrative point of view” (102). If this is an evolution in Kassem's novels, it is not an extraordinary one in terms of the recent evolution of the prototypical science fiction style.

Kassem's novels include direct speech, and most of it is non-naturalistic. At times, this direct speech provides background information about characters and their histories. For example, in hadatha an ra’ā (1995), some of the dialogue is devoted to Ibn al-Qamar's conversations with his mother about his father and his childhood, and in lamasat al-daw’ (2001), an extended narrative from the light explains what happened to Sāmī during his deep-space exploratory mission. However, in many other instances, the purpose of direct speech in Kassem's novels is neither to provide background information nor “to bring the reader up to date with the plot” (Stockwell 2000: 84). Instead, direct speech from the novels concentrates on events occurring alongside the actions ongoing in the novel, and helps to move the plot along. For example, the lectures in la’anat al-ghuyūm focus on pollution, much of the dialogue in hadatha an ra’ā is Ibn al-Qamar conversing with the alien lights, and the dialogue in lamasat al-daw’ and jasad ħārr is often between Ibn al-Qamar and the light that is his transformed father. Background information is most often handled using omniscient narration. In almost every case, the

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24 I have found two exceptions in Kassem Kassem's novels. In la’anat al-ghuyūm, there is a “b-” prefix on one word of dialogue between two of the main characters: rā’ihat-u-hā bi-tushahhi! رانحتها تشيشي! 'Its aroma whets the appetite!' (1993: 10). Such a prefix on a verb would only be found in colloquial Arabic. In lamasat al-daw’, a line of dialogue uses the word immī إمي 'my mother’, a Lebanese colloquial vowelining of the MSA word ʿummi إمي 'my mother' (2001: 86).
language of the direct speech is Modern Standard Arabic (MSA), the typical form of
written Arabic, but a very formal variety of spoken Arabic. It therefore seems
immediately “non-naturalistic” to a speaker of Arabic when he or she reads dialogue that
is taking place in MSA.

6.1.6. Register
6.1.6.1. Register in Science Fiction

Another pulpstyle feature that became a prototypical feature of science fiction is
“the military-scientific register” (Stockwell 2000: 101). Register is “a conventional way
of using language that is appropriate in a specific situation, occupation or topic…” (Yule
2006: 249). While there are several ways to describe the workings or structure of register
(de Beaugrande 1993; Biber 1994), one of the most often used is found in Halliday
(1978). According to Halliday, there are three “[p]rincipal controlling variables” for
“predict[ing]” a situation’s register: “field,” “tenor,” and “mode,” which correspond to
“what is actually taking place,” “who is taking part,” and “what part the language is
playing” (Halliday 1978: 35, 33, 31). Biber (1994) notes that, despite Halliday’s
“deterministic and unidirectional” formulation, these variables not only influence
resulting linguistic forms through which one perceives register, they are also influenced
by them (Biber 1994: 33). Thus, the three variables are as much a part of the register as
the lexicogrammatical forms that reflect them.

Stockwell applies Halliday’s three dimensions to the “situational context” (Biber
& Conrad 2009) within science fiction:
Within the universe of the pulp story, the *field* is often an adventure scenario involving decision-making and action. The *tenor* tends to comprise scientists, adventurers, soldiers, and intelligent action-men. The *mode* (within the story at least) is direct speech, often taking the form of commands, orders, and the syntax of logical reasoning. (Stockwell 2000: 86)

At the same time, the story is written literature, which adds another layer to the three dimensions of the register, that of literature and the “literary context” (86). Finally, rather than mixing these source registers and using them at the same time, pulpstyle often switches abruptly from one to the other.

In addition to these three dimensions of situational context, linguistic features are the second major constituent of a register. Although a register may be primarily “a configuration of semantic resources” (Halliday 1978: 111), it is nonetheless distinguished “lexicogrammatically, because that is how meanings are *expressed*” (Halliday 1978: 185). In terms of identifying registers in a written text, this is perhaps the more important aspect of register: Meaning must be interpreted, but lexis and grammar can be readily identified. Stockwell agrees: “Identifying a particular register involves analysis at various levels of linguistic organisation, from syntactic ordering and patterning to individual lexical choices: the entire lexicogrammar, in other words” (2000: 85). Stockwell does not give a comprehensive list of the lexicogrammatical features of the pulpstyle register, but he does cite several, which include previously mentioned pulpstyle features:
Table 6.3 - The linguistic characteristics of the science fiction register mentioned in Stockwell (2000: 85-88):

<table>
<thead>
<tr>
<th>Science Fiction Register</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lexical</strong></td>
</tr>
<tr>
<td>Story titles (see section 6.1.2)</td>
</tr>
<tr>
<td>Naming patterns (see section 6.1.3)</td>
</tr>
<tr>
<td>Neologisms (see section 6.1.4)</td>
</tr>
<tr>
<td>Dates</td>
</tr>
<tr>
<td>Technical terms (spectrum lines, mass, density)</td>
</tr>
<tr>
<td>Evaluative terms (“somewhat more reliably”)</td>
</tr>
<tr>
<td>Spelled-out measurements (“...an hour,... a minute,... per second”)</td>
</tr>
<tr>
<td><strong>Grammatical</strong></td>
</tr>
<tr>
<td>Story title structure (noun + modifier, see section 6.1.2)</td>
</tr>
<tr>
<td>Third person narrative point-of-view (see section 6.1.5)</td>
</tr>
<tr>
<td>Logical reasoning</td>
</tr>
<tr>
<td>Commands and orders</td>
</tr>
</tbody>
</table>

Finally, Stockwell summarizes his definition of the pulpstyle register:

Pulpstyle register, then, tends to be a mixture of military action-adventure, scientific description, and rational discussion and argument, all filtered through an awareness of the state of knowledge of the reader, and occasionally with lexis and syntax that express an emotional dimension, usually just hyperbolic fear and wonderment. (2000: 88)

Prototypical science fiction retains the military-scientific register. In fact, it has become “the default register of the genre” (Stockwell 2000: 101). All of the formal elements introduced previously in this chapter as part of the formal organization of prototypical science fiction “contribute toward the generic register of pulp science fiction,” and are, therefore, technically part of the military-scientific register (Stockwell 2000: 85). These formal elements are combined with elements of the “source register” (100), that is, the register of scientific inquiry, which includes the aforementioned prominent use of numbers, technical terms, and logical reasoning. Finally, a military or quasi-military element is included, reflected in “commands” and “orders,” but perhaps
just as much in short or clipped speech that helps to move along a story otherwise
burdened with scientific exposition, and suggests action or or a proactive attitude as much
as the scientific elements suggest a careful and studious attitude.

6.1.6.2. The Military-Scientific Register in the Novels of Kassem Kassem

Depending on which view of the military-scientific register one takes, Kassem's
novels demonstrate varying degrees of the register. If viewed in terms of field, tenor, and
mode, only la’anat al-ghuyūm fully meets the criteria Stockwell (2000) gives. If the field
within science fiction “is often an adventure scenario involving decision-making and
action” (Stockwell 2000: 86), then only la’anat al-ghuyūm, with its black clouds of
pollution, anti-pollution spacecraft, and arguments over whether to “encourage the
industrial states to hurry the execution of the [environmental protection] protocols” or
take a new path (Kassem 1993: 79-80), fits this definition of the prototypical science
fiction field. Similarly, if the tenor within science fiction “tends to comprise scientists,
adventurers, soldiers, and intelligent action-men” (Stockwell 200: 86), then only la’anat
al-ghuyūm, with its combination of international environmental scientists, journalists, and
adventurous employees of al-markaz al-ardiyy - al-bi’awiyy المركزي الرقمي - البينيوي 'The
Terrestrial-Environmental Center' (1993: 8), qualifies. Finally, Stockwell defines the
mode of science fiction as “direct speech, often taking the form of commands, orders, and
the syntax of logical reasoning” (Stockwell 2000: 86). While all of the novels have
logical reasoning and direct speech, la’anat al-ghuyūm has more direct speech than the
other novels, and only *la‘anat al-ghuyūm* has “commands” and “orders,” as these generally only appear in a military or quasi-military environment.

If one looks more specifically at lexicogrammatical features, the military-scientific register is still most prominent in *la‘anat al-ghuyūm* for two reasons. First, after *la‘anat al-ghuyūm*, “military action-adventure,” a key element of the military-scientific register (Stockwell 2000: 85), is completely absent. The plots in the novels that follow *la‘anat al-ghuyūm* do not have a military-like or adventure-pursuing organization to which the protagonists belong, giving no opportunity for the use of commands or orders. Second, the frequency of scientific interludes is higher in *la‘anat al-ghuyūm* than in the following novels. *La‘anat al-ghuyūm*’s conferences, journalistic presentations, and anti-pollution spacecraft sorties all contribute the greater number of scientific lexicogrammatical features. That is, scientific language is present in all the novels examined in this dissertation, but less frequent and less prominent than in *la‘anat al-ghuyūm*. In *la‘anat al-ghuyūm*, the purpose of the scientific interludes is dual. The first reason is to explain the real problem of pollution and climate change to the reader, and to relate it to real political and scientific causes. The second reason is to move the action along through explanation of fictional solutions to the fictional problem of the black clouds covering the Mediterranean Sea. Because the first reason involves real scientific explanation, real logical reasoning is more prominent. As a result of a shift in the focus of later novels, the scientific register of the later novels is secondary and, though present, not frequent. Whereas *al-riḥla* ‘the journey’ and *la‘anat al-ghuyūm* لعنة الغيوم ‘the curse of the clouds’ focus on a journey through space and threatening clouds of pollution,
respectively, providing specific justifications for scientific digression, the foci of the later novels are characters. The use of science, and therefore the military-scientific register, becomes less prominent and more secondary.

Another explanation for the apparent move away from the prototypical register in later novels may be Kassem's view of science fiction and other literature. In an interview after the publication of *jasad hārr* (2004), Kassem places “numbers” and “realistic characters” in opposition:

The science fiction novel relies on numbers, not on realistic characters or apparent society. From imagination, it scoops out characters that resemble “robots” and a society that seems “robotic,” that is, the impossible world. Therefore, there is no comparison between the realistic and the science fictional; both types are at a distance from one another. What brings the two together is the imagination of the writer who rewrites reality according to the extant materials he has lived with or the details of his life. However, in science fiction, the world is separated from the material; the writer views it [i.e., the world he constructs] according to the wings of his imagination. (Kassem quoted in ‘Ārif 2004: 52)

In the same interview, Kassem later says that he “tried to mix the two types of literature,” that is, science fiction and *al-adab al-wāqi‘iyy ‘realistic literature,’ in writing *jasad hārr* (Kassem quoted in ‘Ārif 2004: 53). While he is speaking in this interview...
of jasad ḥārr specifically, perhaps this or something like it has been his goal for a period of time and for the writing of other novels. As Kassem tried to make more “literary” novels, the “numbers,” and possibly other features of the military-scientific register, were pushed aside.

6.1.6.3. An Example of the Military-Scientific Register in the Novels of Kassem Kassem

An excellent example of the military-scientific register, which demonstrates both military and scientific aspects of the register, is from la’anat al-ghuyūm. It occurs while Sāmī and Bāsil are on board one of the pollution-fighting spacecraft. The passage is narrated from the point-of-view of Sāmī:

We were busy staring at the radar screen, showing illuminated signals on the orbit’s trajectory and at a distance of 100 temporal units. We asked the moon station to provide us with the full report on the signals. The first statement came from the moon station, confusing us, which prompted me to take over the craft’s...
controls. It was verified that we were orbiting in the orbit charged with electricity. Before I touched the steering control, I pressed the button to increase the speed from 28,800 temporal units / hr to 40,000 temporal units / hr, prompting Bāsil to scream in my face, saying, “Are you crazy?” He tried to reach the speed button, so I pushed him with my shoulder, and the craft followed its orbit to increase 11,200 units / hr. (Kassem 1993: 67-68)

This passage contains all the aspects of register as it is defined in Halliday (1978) and adapted to science fiction in Stockwell (2000). In terms of field, this is certainly an “adventure scenario involving decision-making and action” (Stockwell 2000: 86). In terms of tenor, while there are no soldiers, Sāmī and Bāsil are certainly “scientists, adventurers...and intelligence action-men” (2000: 86). In terms of mode, there is a single instance of direct speech--“Are you crazy?” (Kassem 1993: 68)--there is logical reasoning--“verification” followed by action--and, while there is no command or order, there is an attempt by one actor to stop the speed increase and a blocking of that attempt by another actor, the actions functioning effectively as a pair of clashing commands.

Although it is not narrated in the third-person, this excerpt demonstrates a number of other lexicogrammatical features that are almost identical to those Stockwell points out in his example of the register. First, it includes “numerical measurements” (Stockwell 2000: 87) despite that fact that they are almost meaningless for the reader. Only the “emotional dimension” (Stockwell 2000: 88), another specific aspect of the register, of Bāsil screaming and attempting to prevent the increase in speed tells the reader that this increase in speed is evidently a lot, and, indeed, more than the other character believes is safe. The third numerical measurement, 11,200, is entirely superfluous; it provides the reader only with a difference, the first numerical measure subtracted from the second measure. Another feature is the use of “technical terms” (Stockwell 2000: 87) in the
measurement of distance and speed: *wihda zamaniyya* 'temporal unit' and *wihda zamaniyya / s* 'temporal unit / hr.' The term *wihda zamaniyya* is used throughout *la’anat al-ghuyūm*, but despite what *zamaniyya* 'temporal' would seem to indicate, it is often a measure of distance rather than time. The term conveys to the reader the opaque nature that many technical terms seem to have to those not fluent in scientific jargon. That this term is repeated three times, then abbreviated, in this short span of a few lines only adds to the reader's sense of not being able to evaluate fully the “scientific” information.

6.2. Conclusion

One broad category in which one can group certain prototypical features of a genre is formal organization. As mentioned above, by formal organization, Frow (2005) means “the repertoire of ways of shaping the material medium in which it [i.e., the genre] works and the ‘immaterial’ categories of time, space, and enunciative position” (74). Most of these methods of shaping the material and immaterial media correspond to features of prototypical science fiction. These formal features, according to Stockwell (2000), were established in the style and form of U.S. science fiction magazines of the 1920s and 1930s. Stockwell (2000) calls these features “pulpstyle,” following Taylor (1990). There are six such pulpstyle-derived features: a short-story format; plainly descriptive titles; a pattern in the names of characters; the creation and use of neologisms; third person narrative focalized through a single main character; and a military-scientific
Their presence in each of the five Kassem Kassem novels studied in this dissertation is summarized in table 6.4.

Table 6.4 - Pulpstyle features in five novels Kassem Kassem novels

<table>
<thead>
<tr>
<th>Feature</th>
<th>al-riḥla</th>
<th>la’anat al-ghuyūm</th>
<th>ḥadatha an-ra’a</th>
<th>lamasat al-daw’</th>
<th>jasad ḥārr</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1.1. Short-story format</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.2. Titles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Form (noun + modifier)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>- Function (plainly descriptive)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.3. Character names and naming</td>
<td>Partly &amp; adapted</td>
<td>Partly &amp; adapted</td>
<td>Partly &amp; adapted</td>
<td>Partly &amp; adapted</td>
<td>Partly &amp; adapted</td>
</tr>
<tr>
<td>6.1.4. Fictive neology</td>
<td>Yes</td>
<td>Yes (&amp; greatest number)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6.1.5. Narrative focalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Third-person narration</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>- Focalization through main character</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>- High density of direct speech</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.6. Military-scientific register</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Using Halliday’s (1978) field, mode, tenor</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>- Using lexicogrammatical features</td>
<td>Partly</td>
<td>Yes (&amp; best examples)</td>
<td>Partly</td>
<td>Partly</td>
<td>Partly</td>
</tr>
</tbody>
</table>

One can draw a number of conclusions from the table. First, *la’anat al-ghuyūm* contains the most aspects of formal organization. That is, in terms of formal organization,
"la’anat al-ghuyūm" is the most prototypically science fictional of the five Kassem Kassem novels examined in this dissertation.

Second, over time, Kassem has moved away from the prototypical title in function, if not form, and he has similarly moved away from focalization through the main character. As discussed in section 6.1.6.2, this has also occurred in the lexicogrammatical aspects of the military-scientific register, a change that is not reflected in the “yes/no” format of this table. In each case, Kassem’s change in style parallels changes that have occurred in English-language science fiction, though not in prototypical English-language science fiction.

Third, the fact that Kassem wrote none of his science fiction as a short story may be as much adaptation to the local environment as the adaptation of character names. In the publishing environment of the Arab world, there was no venue available to Kassem to publish short science fiction. A novel, on the other hand, can published as a stand-alone piece, and finding a publisher is relatively easy in the Arab world (Tresilian 2008). One could therefore group adapted character names and the lack of a short-story format together under the rubric “cultural adaptation.”

These aspects of formal organization derived from pulpstyle are not the only aspects pertinent here. Prototypical science fiction also shapes “the ‘immaterial’ categories of time, space, and enunciative position” (74) through the use of particular types of deixis in order to establish three prototypical science fiction features: the future setting; the extraterrestrial setting; and the non-human character. These features and the types of deixis used to establish them are the subject of the next chapter.
7. Formal Organization: Deixis

According to Frow (2005), there are elements of formal organization in addition to those discussed in chapter 6:

At the level of story and character, formal organisation involves the shaping of the temporal and spatial relations of the projected world, the quality and duration of actions, and the relation between the central narrative ‘voice’ or perspective and the figure of the author, on the one hand, and the represented world on the other, which in turn sets up a certain temporal relation between the present of narration and the narrated time. (74)

Many of these elements correspond to the concept of deixis, which “concerns the ways in which languages encode or grammaticalize features of the context of utterance or speech event...” (Levinson 1983: 54). The most common deictic expressions, which Levinson (1983) calls “prototypical,” include “demonstratives, first and second pronouns, tense, specific time and place adverbs like now and here, and a variety of other grammatical features tied directly to the circumstances of utterance” (54). These expressions are reckoned from a deictic center, which is usually the speaker of the utterance (Levinson 1983: 63-64). However, through deictic projection, “...deictic expressions are used in ways that shift the deictic centre to other participants, or indeed to protagonists in narratives...” (Levinson 1983: 64), as is the case in literature (Semino 1997). Levinson (1983) places all instances of deixis in five categories: person deixis, place deixis, time deixis, discourse deixis, and social deixis.

In literature, deictic expressions may be of particular importance because the reader uses them to “reconstruct” the context, that is, the world of the story that he or she

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25 While there have been more recent studies of deixis (Kasher 1998; Levinson 2004), Levinson 1983 remains the clearest exposition of the concept.
can only glimpse using the available text (Semino 1997: 36). This is especially true in science fiction because the context within the text may be substantially distant from or foreign to the reader (Stockwell 2000: 26). Because of this importance, Stockwell (2000) adapts Levinson's five categories of deixis to science fiction and its peculiar necessities, resulting in perceptual deixis, spatial deixis, temporal deixis, relational deixis, and textual deixis (2000: 24). Stockwell also adapts a sixth type of deixis, called “syntactic deixis” in Green (1995), as compositional deixis (Stockwell 2000: 24, 41). Using the first three modified categories, Stockwell demonstrates how deixis is used to establish three prototypical science fictional features: the existence of non-human characters; an extraterrestrial setting; and a future setting.

7.1. Perceptual Deixis

7.1.1 Perceptual Deixis in Science Fiction

According to Levinson (1983), “Person deixis concerns the encoding of the role of participants in the speech event in which the utterance in question is delivered...” (62). The primary roles within the category are first person, second person, and third person, though the third person “does not correspond to any specific participant-role in the speech event” (62, 69). The typical deictic expressions used to encode these roles are the pronoun and its “associated predicate agreements” (Levinson 1983: 62).

Stockwell (2000) adapts this category to science fiction by re-naming it “perceptual deixis” because “in science fictional (and other fantastic) universes humans, aliens, robots, computers, animals, and inanimate objects can have consciousness and so
are able to use deictic expressions…” (27). That is, specifying “person” is inappropriate for a literary genre in which non-persons may also be characters. Indeed, because aliens and robots are two elements of prototypical thematic content, non-human characters are not only a possibility, they are a prototypical feature of science fiction.

In a more general, literary context, Stockwell also argues for the inclusion of the third person as a participant because “authors often have narrators describe the apparently internal thoughts or spoken words of a character in the third person...,” so “the third person form attracts a deictic dimension, as far as the reader is concerned, just as much as other characters who are presented similarly indirectly by the author through a narrator” (2000: 28). Also, “First, second and third person deictics must all be included in perceptual deixis since they are aspects of the contextual framing managed during reading” (2000: 27). In short, third person deictic expressions are important, at least when examining deixis in a literary context.

7.1.2. Perceptual Deixis in the Novels of Kassem Kassem

7.1.2.1. First-person Perceptual Deixis

Kassem Kassem uses perceptual deixis to establish the consciousness of non-human characters. One way he does this is to have non-human characters use first person pronouns and verb inflections. For example, the first words uttered by an alien in al-riḥla are inna-nā lan nabqā ṭawīlan إِنَّا نَلْنَحْبُقْ طَوِيلاً 'We will not stay long' (Kassem 1991: 6), which include the “reduplicated pronoun subject” -nā 'we' as the subject of the sentence (Ryding 2005: 423-424). At other times, the aliens use independent personal
pronouns, for instance *nahnu narghab fi...* 'We want to...' (Kassem 1991: 8). At still other times, the aliens exclude the pronoun altogether, as is permissible in Arabic: *a’rif mā tufakkirūn bi-hi* 'I know what you (pl.) are thinking' (Kassem 1991: 77). In every instance, it is apparent that the use of pronouns and verb inflections by aliens in *al-riḥla* demonstrates the first person “participant-role in the speech event” (Levinson 1983: 69).

In the novels *ḥadatha an ra’ā* (1995) and *lamasat al-ḍaw*’ (2001), *al-ḍawā’* the lights also use first person pronouns and verb inflections. For example, in *ḥadatha an ra’ā*, the lights use the independent first person plural pronoun *nahnu* 'we' when addressing Ibn al-Qamar: *nahnu natba’uka mundhu ghadarta mahṭat al-qamar* 'We have been following you since you left the moon station' (Kassem 1995: 38). The lights also use the reduplicated first person plural pronoun in the same novel: *innanā kamā qulnā laka ḥazmat ḏaw’watariyya* 'We, as we said to you, are a stringy beam of light' (Kassem 1995: 38). In other instances, the verb alone is used, inflected for the first person plural: *kunnā naqūm bi-ḍawra* 'We were doing a round' (Kassem 1995: 68). Similar usage appears in *lamasat al-ḍaw’* (2001):

في محطتنا، نجلس ساعات، نراقب، نحلل، نشاهد تفاصيل حياتكم، أرقام سياراتكم والوان ثيابكم...

fī maḥṭat-i-nā, najlis sā‘āt, nurāqib, nuḥallil, nushāhid tafāṣīl hayāt-i-kum, arqām sayyārāt-i-kum, wa-alwān thiyyāb-i-kum...

On our station, we sit for hours, observing, analyzing, watching the details of your lives, the number of your cars, the colors of your clothes.... (Kassem 2001: 32)
The lights, like the aliens in *al-riḥla*, use pronouns and verbs, establishing and reinforcing their “personhood.”

7.1.2.2. Second-person Perceptual Deixis

Another way Kassem uses perceptual deixis to establish the consciousness of non-human characters is to have them addressed in the second person. For example, in *al-riḥla*, humans address the two aliens who first arrive on Earth directly on the second page of text: *man antumā, wa-min ayna antumā?* ‘Who are you (dual), and from where are you (dual)?’ (Kassem 1991: 6). In other instances, a single alien is addressed in the second person: *unẓ ur ilá al-jawāb amāma-ka ’alá al-shāsha* ‘Look (singular) at the answer in front of you on the screen!’ (Kassem 1991: 44).

The same usage appears when the lights are addressed in *hadatha an raʿā* and *lamasat al-dawʿ*. In *hadatha an raʿā*, for example, Ibn al-Qamar asks the lights *kayfa wasaltum ilá māḥat al-ard?* ‘How did you arrive at the Earth station?’ (Kassem 1995: 38). Similarly, in *lamasat al-dawʿ*, Ibn al-Qamar uses, in one instance, the vocative particle *ayyuhā* ‘O’ to address the lights: *ayyuhā al-ṣadīqā* ‘O friends’ (Kassem 2001: 32).

7.1.2.3. Third-person Perceptual Deixis

A third way Kassem uses perceptual deixis to establish the consciousness of non-human characters is to refer to them using forms that are grammatically plural. In Modern
Standard Arabic, “...non-human plurals are grammatically fem[inine] sing[ular]...” (Badawi, Carter & Gully 2004: 93), and only human plurals are grammatically plural. Ryding (2005) supplies a more detailed description: “If a plural noun refers to nonhuman entities, be they creatures or inanimate things, it takes feminine singular agreement...This applies to agreement with verbs, adjectives, and also pronouns” (Ryding 2005: 125). Ryding (2005) calls the quality that the plural noun must have to be grammatically plural “humanness” (125).

In Kassem's novels, these features of agreement, usually reserved for human plural nouns, are used with plural nouns referring to extraterrestrial creatures. For example, in Modern Standard Arabic, non-human plural nouns are referred to using the feminine singular pronoun hiya هي 'she' (Badawi, Carter & Gully 2004: 310-311, 361). However, in Kassem's novel al-riḥla (1991), the grammatically plural third-person pronoun hum م 'they' is used when referring to the aliens from the planet al-mīzān. For example, on the planet al-mīzān, one of the human characters says of the aliens, hum laysū mithla-nā هم ليسوا مثلي نا 'They are not like us' (1991: 77), using the independent pronoun hum م 'they'. On the same page, internal dialogue of the main human character, Sāmī Fāyid, uses hum م 'they' as a reduplicated pronoun subject in the phrase fa-innahum فيهم 'so, indeed, they...' (Kassem 1991: 77). Similarly, when referring to al-adwāء 'the lights' in ḥadatha an ra‘ā (1995) and lamasat al-daw’ (2001), the main character uses hum. In ḥadatha an ra‘ā, the main character says of the lights hum yaqtaribūn هم يقتربون 'they approach' (Kassem 1995: 36), using hum as a subject pronoun. In an internal dialogue, the main character uses hum as an object pronoun:
(wa-qult fī qarārat nafṣī kayfa yu‘aqqal an arā-hum wiḥḍī)?

(and I said to myself how is it reasonable that I alone see them)? (Kassem 1995: 64)

This use of the third-person pronoun hum for the lights also appears in lamasat al-ḍaw‘ (2001). For example, in a statement nearly identical to one in hadatha an ra‘ā, Ibn al-Qamar says inna-hum yaqtaribūn minnī! 'they are approaching me!' (Kassem 2001: 32).

Like subject and object pronouns, relative pronouns in Modern Standard Arabic are restricted in their use: “The plural relative pronoun is used only when referring to human beings” (Ryding 2005: 323). Kassem, however, uses the plural relative pronoun to refer to extraterrestrial creatures. In lamasat al-ḍaw‘, for example, the impersonal narrator uses the plural relative pronoun to refer to the lights, also called faḍā‘īyyūn 'spacers,' saying al-faḍā‘īyyīn alladhīn afṣāhū bi-dawri-him li-nāḥid .. '...the spacers who cleared a space, on their part, for Nāhid...' (Kassem 2001: 33).

Another way Kassem demonstrates the rationality of non-humans in his novels with the grammatical plural is through the use of sound masculine plurals. According to Ryding (2005), “The sound masculine plural...almost without exception...only occurs on nouns and adjectives referring to male human beings or mixed groups of male and female human beings” (140; bold in the original). Kassem frequently uses the sound masculine plural faḍā‘īyyūn 'spacers' in his novels hadatha an ra‘ā and lamasat
*al-daw*’ to refer to the non-human but sentient lights from outer space, who he also refers to as *al-adwâ*’ ‘the lights' and *rijāl al-faadâ*’ ‘spacemen.’

Yet another way Kassem uses the grammatical plural to establish the rationality of the non-human characters is through the use of possessive pronoun suffixes. Normally, non-human plurals take the possessive pronoun *hā* ها ‘her’ (Badawi, Carter & Gully 2004: 492). In Kassem's novels, however, non-human sentient characters take the plural usually reserved for humans, *hum* هم ‘their.’ For example, in *al-rihla* (1991), the main character refers in his internal dialogue to *libās-u-hum* ‘their clothing’ (Kassem 1991: 77), meaning the clothing of the aliens on the planet *al-mīzân*, and he also refers to *fatiyāt-u-hum* ‘their young women’ (Kassem 1991: 77), meaning the young women in the society of *al-mīzân*. The same use of the plural possessive pronoun appears in Kassem's other novels in reference to the lights. For example, in *ḥadatha an raʿā*, he writes *wa-qad izdādatā raghba fī talammus athr-i-him* ‘...their (fem. dual) desire to touch a sign of them (masc pl.) grew’ (Kassem 1995: 96)

Verb inflections are another method Kassem uses to demonstrate that non-human characters are given grammatical “humanness” in the novels. In Modern Standard Arabic, a verb is typically inflected in the feminine singular if the subject of the verb is a non-human plural. In Kassem's novels, however, verbs are inflected in the plural when the subject of the verb is three or more aliens. In *al-rihla*, for example, the main character says *lam yakhtārū-nā ‘abathan* ‘They did not choose us foolishly...’ (Kassem 1991: 26), in reference to the aliens who will take him and his friends on their journey. In later novels, human characters do likewise in reference to the three lights.
Finally, in addition to the use of the grammatically masculine or mixed gender plural *hum* هم 'they' or 'them,' Kassem also uses grammatically feminine plural forms to demonstrate the rationality of non-human characters. Like the use of the third-person masculine or mixed gender plural pronouns and verbs, the use of the feminine plural form in Modern Standard Arabic is restricted to humans. Near the end of *al-riḥla,* the main character, Sāmī Fāyid, refers to female aliens on the planet *al-mīzān* in the novel *al-riḥla* using the the third-person feminine plural pronoun *hunna* هن 'they' and corresponding verb inflections. In one case, he writes *fatiyāt-u-hum yabtasimna dāʿimān* فتياتهم يبتسمن دائمًا 'their young women are always smiling' (Kassem 1991: 77), inflecting the verb *ibtasama* ابتسم 'he smiled' in the third-person feminine plural imperfect. On the same page, he refers to *naẓarāt-u-hunna al-ḥāda* نظاراتهن الحادة 'their (fem.) sharp looks' (Kassem 1991: 77), using the possessive pronoun *hunna* هن 'their (fem.).' Therefore, the use of the feminine plural form in reference to the aliens demonstrates the sentience, or “humanness,” of the characters to whom the forms refer.

7.2. Spatial Deixis

Just as person deixis concerns people, “Place deixis concerns the encoding of spatial locations relative to the location of the participants in the speech event” (Levinson 1983: 62). The typical subcategories of place deixis are “near” and “far,” usually expressed through demonstratives, “deictic adverbs of place,” and, at times, “motion verbs that have built-in deictic components” (Levinson 1983: 62, 83). Stockwell adapts

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26 There is no infinitive in Arabic; the dictionary form of a verb is the third-person masculine singular perfect.
this category to science fiction by re-naming it “spatial deixis,” but that is the extent of the adaptation; its importance lies in its use.

Prototypically, science fiction takes place “extra-therrestrially” (Stockwell 2000: 31) or “in space” (Stockwell 2004: 518): for example, in a space station orbiting the Earth, on the Moon, in a spaceship in outer space, or on another planet. Deictic expressions are used to establish and reinforce this prototypical setting. An author may use demonstratives, such as “when ‘here’ of the ‘coding location’ of the narrator does not correspond with my home planet [i.e., Earth]” (Stockwell 2000: 31). For example, “So here she was…” are the first words of the fourth chapter of the novel Pandora’s star, but the reader soon learns that the narrator has placed him or her on the fictional planet Far Away, some distance from Earth (Hamilton 2004: 89). Similarly, an author may use adverbs of place to establish the extra-terrestrial setting more overtly. For example, in the passage “Gemal emerged from its jump six hundred and fifty thousand kilometres above Mirchusko, where the gas giant’s gravity anchored it in a slightly elliptical orbit…” (Hamilton 2008 [1996]: 704), the phrase “six hundred and fifty thousand kilometres above Mirchusko” functions as an adverb of place to locate the reader in space near a planet, a location reinforced by the following reference to an orbit.


“We entered the orbit capsule toward the climate observation station located on the surface of the moon, our craft transporting us to the huge building which was built recently” (Kassem 1993: 15)

Habatnā bi-al-markaba ‘alā saṭḥ bināya ‘amalnā wa-akhḍhnā al-maṣ‘ad ilā al-ṭābiq 36...

“We landed our craft on the roof of the building of our work and took the elevator to the 36th floor...” (Kassem 1993: 27).

Tilka al-layla kuntu wa-shawqī mumaddidīn fī mustashfā al-faḍā’ al-tūnisiyy, kull ‘alā sarīr...

“That night, Shawqī and I were lying in the Tunisian Space Hospital, each on a bed...” (Kassem 1993: 113).

In each of these cases, the science fictional setting--the surface of the moon, the rooftop spacecraft landing pad, and the “space hospital” in Tunis--is established using adverbs of place in the narrative, rather than using demonstratives or adverbs of place in headings. This is also the pattern Kassem follows in hadatha an ra’ā, lamasat al-daw’, and jasad ḥārr.
7.3. Temporal Deixis

Finally, Stockwell adapts time deixis to science fiction. According to Levinson (1983), “Time deixis concerns the encoding of temporal points and spans relative to the time at which an utterance was spoken (or a written message inscribed)” (62). This encoding is accomplished in two ways: “...in deictic adverbs of time (like English now and then, yesterday and this year)…” and in the tense of verbs (Levinson 1983: 62).

In adapting time deixis to science fiction, Stockwell (2000) renames it “temporal deixis” and concentrates on how this type of deixis is used in narrative. Traditionally, narrative is expressed in the past tense: “He stepped out of the car and stood up,” for example. In fact, Stockwell (2000), citing Fleischman (1990), writes that the use of the past tense “is a defining characteristic of narrative” (Stockwell 2000: 35).

More importantly, Stockwell focuses on how the use of the narrative past tense is used to establish a prototypical feature of science fiction, a future setting (2000: 34; 2004). Because expressing a future setting through the use of a future tense would be “potentially a threat to plausibility” (2000: 35), and plausibility is a key feature of prototypical science fiction (see section 8.2), science fiction is instead written in the manner traditionally used for “recounting real experience” (2000: 35), the same technique used in mainstream fiction. Science fiction is prototypically set in the future, and its prototypical method for narrating a plausible future setting is to use the past tense.

Science fiction may also include adverbs of time in the form of “temporal locating expressions” (2000: 34). Two examples of such expressions are “in your day” (Stapledon

However, neither past tense narration nor temporal locating expressions are sufficient to establish the future setting. In order to locate the setting in the future, science fiction must also include something that “can be used calendrically to locate events in 'absolute' time relative to some absolute origo...” (Levinson 1983: 73), that is, in future history. This means some indication of how far into the future the reader must project himself or herself. This indication may be specific, such as a calendar date or a reference to a historical event combined with a temporal locating expression, or general, such as the presence of consumer technology that suggests scientific development beyond that available in the reader's present. For example, in the science fiction novel Pandora's star, the author uses the phrase “back in 2170, two hundred and ten years ago...” (Hamilton 2004: 11), combining a calendar year with a temporal locating expression. As in this example, something must tether the deictic expression to a date.

Four of Kassem's works demonstrate the main part of this prototypical feature, the use of the past tense in narrative set in the future. In la‘anat al-ghuyūm, hadatha an ra‘ā, lamasat al-ḍaw’, and jasad ḥārr, the past tense is used in narrative for the narrative past, that is, the “present” of the narrative. In al-riḥla, the one exception, the past tense is used, but the setting is not the future. The past tense is used solely because that is the custom for any fictional narrative.
Additionally, the past tense is used in these novels to convey a past prior to the events of the novel. For example, in *lamasat al-dāw‘*, the narrative discusses the living arrangements of Nāhid and Ibn al-Qamar when on the moon:

بعد أن انتظمت دراستهما، انصرفا بعد ذٌٍٍذ من إدارة الجامعة للسكن معاً، فأختارا منزلًا هادئًا بعيدًا عن محطات السيارات السابقة في طريقى القمر، بالقرب من حديقة الحياة، في الحي الشرقي، في منزل متفرد بظل على مرقق البهيرة الجليدية، حيث نجحت محددة البدوي المستكشف Nomad Explorer في تحويل حلم المياه إلى حقيقة.

After arranging their studies, they then applied for permission from the university administration to live together and chose a serene house far from the automobile stations floating in the moonways, near the park of life, in the eastern quarter, in a detached house overlooking the intersection of the ice lake where the 'steamroller' *Nomad Explorer* [had] succeeded in transforming the dream of waters into a reality. (Kassem 2001: 8)

While the past tense of most of this narrative is the novel’s present, the short part about the success of the *Nomad Explorer* is prior to the events of the novel. However, this success is still in the reader’s future: the *Nomad Explorer* is only theoretical, the topic of a popular science article that Kassem had read, possibly a translation of Wilson 1998.

Occasionally, though more rarely, Kassem also uses temporal locating expressions, but the expressions are paired with additional information to provide a "calendrical" time indication. For example, in *ḥadatha an ra‘ā*, Kassem writes, *mundhu thalāthin ‘āman ay ‘ām 1993*

منذ ثلاثين عامًا أي عام 1993 ‘thirty years ago, that is, the year 1993’ (Kassem 1995: 83), allowing the reader to calculate the “present” date of the novel, about 2023. In the same novel, the main character thinks to himself:
My imagination wandered to years coming until 2060.... (Kassem 1995: 84)

The pairing of the temporal expression with a date permits the reader to locate the precise “absolute” point in future history that the story takes place. In this instance, once can surmise that the novel's present is prior to 2060, but not many years prior, as \(a'wām\) muqbila 'coming years' seems to indicate a relatively small number of years.

In other instances, Kassem uses similar methods to establish the future from which the past tense or temporal locating expression is reckoned. Sometimes, as above, this means a calendar date. In \(la'anat\ al-\ ghuyūm\), for example, a new building is said to have been “built...according to specifications of the year 2050” (Kassem 1993: 12). Similarly, in jasad ḥārr, a tombstone records a date of disappearance as January 28, 2006, two years after the novel's publication date (Kassem 2004: 34). More often, the future setting is established through content “clues” given to the reader. Some of the clues are specific. For example, in \(la'anat\ al-\ ghuyūm\), Sāmī and Jamīla al-Nahār have coffee at maqhā al-wīمبī al-jadīd 'The New Wimpy Café' (Kassem 1993: 27). At the time of the novel's publication, the “old” Wimpy Café, a famous coffeehouse that was located at the intersection of 'Umar bin 'Abd al-'Azīz Street and Hamra Street in Beirut, was still operating. The “New” Wimpy Café, therefore, was necessarily in the future.

Other clues are more general. The use of a sayyāra ṭā'ira 'flying car' (Kassem 2004: 10) and dining in al-maṭ'am al-ṭā'ir 'the flying restaurant' (Kassem 2001: 28) for example, are “futuristic” and thus help to establish the future setting.
Contextual cues, then, as much as deictic expressions, are used to establish the future setting.

7.4. Conclusion

Some elements of the formal organization of a genre as given in Frow (2005) correspond to the concept of deixis. As mentioned previously, the most accepted definition of deixis is from Levinson 1983: “...the ways in which languages encode or grammaticalize features of the context of utterance or speech event...” (54). Stockwell (2000) adapts Levinson's five categories of deixis to science fiction. Using three of these modified categories--perceptual deixis, spatial deixis, and temporal deixis--Stockwell demonstrates how deixis is used to establish three prototypical science fictional features: the existence of non-human characters; an extraterrestrial setting; and a future setting. In the five Kassem Kassem novels examined here, only la’anat al-ghuyūm does not use perceptual deixis to establish the presence and sentience of non-human characters, and this is because there are no non-human characters in that novel. All five novels use one manifestation of spatial deixis, adverbs of place, to establish an extraterrestrial setting. Finally, only al-rihlā does not use temporal deixis to establish a future setting, because it is set in the present rather than the future.
8. Rhetorical Structure

A second category in which one can place certain prototypical features of a genre is the rhetorical structure. The “rhetorical structure of a genre” is the “organis[ation]” of the “textual relations” of the sender to the receiver (Frow 2005: 74), which are, in literary terms, the author and the reader. Most importantly for a definition of prototypical science fiction, the rhetorical structure is a manifestation of “negotiation and an agreement (or disagreement) about the kind of truth status that is to be attributed to what is being talked about” (Frow 2005: 75). Stockwell (2003b), discussing the “truth value status” (254) of science fiction, writes:

…it[s]cience f[iction] is a form of fiction in which the fictionalized world is foregrounded as being alternate to our own actual world. It is distinguished from fantasy, magical realism, gothic and horror by the presence of elements of plausibility, by a traditional association with the ideology of the scientific method and by a technique of logical extrapolation from the current state of knowledge….” (Stockwell 2003b: 254-255)

8.1. Alternativity

Prototypical science fiction presents a world that is significantly alternative to the real world. This “alternativity” is a characteristic of all literature (de Beaugrande 1987; Stockwell 2002: 80, 91, 94-96), making it an essential characteristic of all science fiction. However, the alternativity of science fiction is notably greater than that of most other
types of fiction, a characteristic it shares with the literature of the fantastic (de Beaugrande 1987: 59; Stockwell 1996, 2002a).27

Ryan (1991) provides a set of criteria with which to measure the degree of alternativity of literature. The criteria describe the “accessibility” of the “textual actual world,” or TAW, by specifying differences between the TAW and the “actual world,” or AW. These criteria are the following:

A. Identity of properties (abbreviated as A/properties): TAW is accessible from AW if the objects common to TAW and AW have the same properties.

B. Identity of inventory (B/same inventory): TAW is accessible from AW if TAW and AW are furnished by the same objects.

C. Compatibility of inventory (C/expanded inventory): TAW is accessible from AW if TAW's inventory includes all the members of AW, as well as some native members.

D. Chronological compatibility (D/chronology): TAW is accessible from AW if it takes no temporal relocation for a member of AW to contemplate the entire history of TAW...

E. Physical compatibility (E/natural laws): TAW is accessible from AW if they share natural laws.

F. Taxonomic compatibility (F/taxonomy): TAW is accessible from AW if both worlds contain the same species, and the species are characterized by the same properties...

G. Logical compatibility (G/logic): TAW is accessible from AW if both worlds respect the principles of noncontradiction and of excluded middle.

27 According to Freedman, the estrangement aspect of Suvin’s concept of cognitive estrangement “refers to the creation of an alternative fictional world” (2000: 17), much like Ryan’s concept of alternativity. However, in Freedman’s estimation, a fictional world created by pure estrangement is without limit, and it is only the cognitive aspect that restrains this otherwise limitless world, resulting in science fiction.
H. Analytical compatibility (H/analytical): TAW is accessible from AW if they share analytic truths, i.e., if objects designated by the same words have the same essential properties.

I. Linguistic compatibility (I/linguistics): TAW is accessible from AW if the language by which TAW is described can be understood in AW. (Ryan 1991: 558-559)

According to Ryan, in “science fiction proper,” which we can think of as prototypical science fiction, some of the “relations” are not changed: E/natural laws, G/logic, H/analytical, and I/linguistics (Ryan 1991: 563). However, unlike non-fiction and mainstream fiction, a number of relations may be changed. First, the relation D/chronology is “severed,” to use Ryan's (1991) term, because science fiction is prototypically set in the future from the point of view of the author. Next, the relation B/same inventory is severed for two reasons: First, in prototypical science fiction, there are “new things,” usually representing “technological advances” (Ryan 1991: 563) and introduced through neologisms, and second, like almost all fiction, science fiction introduces fictional characters. However, because the inventory of objects, locations, and characters “includes all the members of AW, as well as some native members,” such as new inventions and new characters, the relation C/expanded inventory applies (Ryan 1991: 558). Finally, because prototypical science fiction includes aliens and other non-human characters, such as transformed humans and robots, the relation F/taxonomy is severed.

Kassem's novels demonstrate the “severed” relations that Ryan (1991) cites as part of “science fiction proper.” First, D/chronology is severed in la ‘anat al-
because they are set in the future, as discussed in this dissertation in section 7.3. Second, B/same inventory is severed, and C/expanded inventory applies to all of Kassem's novels because the inventory of the “objects” of the novels includes the whole of the inventory of the AW, such as automobiles and real countries and cities, as well as objects not in the inventory of the AW, such as flying cars, fictional characters, and fictional locations, such as the moon station. Finally, F/taxonomy is severed in each novel except laʾanat al-ğhuyūm (1993) because each novel has at least one addition to the taxonomy of the AW, either aliens or transformed humans. In laʾanat al-ğhuyūm (1993), there are hints of Sāmīʾ's other, transformed nature (see section 5.4.2), but this is never made explicit.

Ryan also notes that her list of relations “is anything but definitive” (1991: 572). In his definition of the “truth value status” of science fiction, Stockwell (2003b) lists three more aspects that can be interpreted as additional relations of prototypical science fiction, or at least additional specifications of Ryan's nine listed relations as they apply to prototypical science fiction. These three aspects are plausibility, “a traditional association with the ideology of scientific method, and...a technique of logical extrapolation from the current state of knowledge” (Stockwell 2003b: 254-255). The remainder of this chapter addresses these three additional aspects and how they apply to Kassem Kassem's novels.

8.2. Plausibility

8.2.1. Plausibility in science fiction

Another feature Stockwell (2003b) uses to distinguish science fiction from other forms of fantastic fiction is plausibility. Plausibility's importance in science fiction is
another pulpstyle-derived feature. In 1926, Hugo Gernsback, the editor of *Amazing Stories* and the person most associated with pulp science fiction, wrote an editorial response to a reader's letter. In the letter, the reader asserts that “obvious scientific mistakes” in some stories make them “seem more like fairy tales than scientifiction,” a term briefly used by Gernsback and his readers in the 1920s before “science fiction” became the preferred term. In the response, titled “Plausibility in scientifiction,” Gernsback writes that “authors often take poetic license, sometimes disregarding true scientific facts, although still retaining enough scientific accuracy to make the plot or story seem probable and at the same time interesting” (Gernsback 1926b: 675).

Gernsback makes explicit the balance he wishes to strike between “scientific accuracy” and a good story: it must “seem probable” (Gernsback 1926b: 675). “Seem” is the more important word. Plausibility, in Gernsback's mind, is measured in what is necessary to sway a reader's belief. As had occurred with many formal features of pulpstyle, plausibility became a prototypical feature of science fiction.

The prototypical form of science fiction plausibility is very much as Gernsback first described it. As Stockwell (2000) put it, “The 'world' built by the narrative must be one that convinces the reader, at least for the duration of reading the text, that the presented future is a reasonable and coherent scenario” (12). There are two steps in the process of convincing the reader. The first step is creating a world that is “coherent and internally consistent” (Stockwell 2000: 43). However, this is not sufficient; well-constructed fantasy literature is internally consistent (Tolkien 1994). The second step is connecting the constructed world to the reader's world. As Jones writes, ”The creation of
any s[ience] f[iction] story or novel involves the devising of a system of correspondences between a world the reader/writer knows and a world that meets the needs of the particular mental experiment in question” (Jones 1999: 5). This is facilitated through “anchor[s] in reality” (Dickson 1974). According to Dickson (1974), “…we physically identify other people and objects on the basis of a certain number of recognized signals” (Dickson 1974: 299). Plausibility is achieved when a reader is provided “a critical number of such signals which, once reached, carry complete conviction in the scene to which they belong” (Dickson 1974: 300). One can place literary anchors in reality in two categories, content-based and language-based.

Dickson (1974) concentrates on content-based anchors: “Each time the author sets out an anchor in reality by evoking a sight, sound, or smell which the reader has tucked in his own memory, he increases the plausibility of his story to the critical point where the reader will give up all resistance to belief and live it in his imagination, as fully as the author did in his while writing it” (Dickson 1974: 301). In the case of science fiction, where an author must provide such signals to establish the plausibility of an “extraterrestrial scene” (301) or another similar setting never experienced by a reader, such as the future, the author may use “the anchor in reality at second remove” (302). In this case, a “chain of justification” or “logic-chain” is used in which “imagination is justified by an hypothesis, which is in turn justified by fact” (302). However, this is not always necessary. For example, pulp science fiction was often set in cities on the U.S. East Coast with which the author and reader were familiar (Stockwell 2000: 82). This
“root[ed] the implausible action in a plausible, mundane, and everyday environment” (Stockwell 2000: 82) without the need for any “second remove” reality anchor.

Stockwell (2000) writes of the second kind of anchor in reality, the language-based anchor. According to Stockwell, “…the plausibility of futuristic visions is…a product of the deictic and referential elements in the text…” (2000: 12). By the “deictic” elements, Stockwell refers to the use of deixis, which “concerns the ways in which languages encode or grammaticalize features of the context of utterance or speech event…” (Levinson 1983: 54). In wording that echoes Dickson (1974), Stockwell says that these elements are one of “the ways in which the narratives are anchored to an apparent reality” (Stockwell 2000: 42). By the “referential” elements, Stockwell refers both to deixis, which is referential, and to fictive neology, that is, neologisms and neosemes. Because fictive neology uses the same word formation processes as non-fictive neology, the type of word formation used in a work of science fiction can lend that work some of the credibility given to the non-fiction field where it is most often found. For example, science fiction that “feature[s] a greater concentration of borrowings, derivations and compounds of the single word and multiple-word lexical item types” will be associated with “scientific discourse,” where these methods are most often used (Stockwell 2000: 133). Similarly, one can examine the parts of the neologisms themselves to find from which field they are taken and therefore what “flavour” they give that neologism and that work of science fiction (Stockwell 2000: 133). The plausibility stemming from the use of fictive neology “can partly be seen as a product of...
reader's] familiarity with the sources of neologisms used in the text” (Stockwell 2000: 134).

8.2.2. Plausibility in Kassem Kassem's novels

In his works, Kassem uses both content-based and language-based anchors.28 In *la’anat al-ghuyūm* (1993), for example, Kassem makes use of specific locations as content-based anchors. Just as pulp era authors set their stories in the U.S. cities familiar to most of their readers (Stockwell 2000), Kassem adds details of Beirut to one of his novels. As Kassem puts it in an interview after the publication of *la’anat al-ghuyūm*, “...I did not soar outside of the place where we live, indeed it is a starting point: the cemetery, the sea, the Wimpy, places I singled out to recall because I spend most of my time in them” (Kassem quoted in Jarjūra 1993). The “Wimpy” he mentions in the interview refers to the Wimpy Mövenpick Café, a famous coffeehouse that was located at the intersection of ‘Umar bin ‘Abd al-‘Azīz Street and Hamra Street in Beirut, and one of several “European-style cafés” (Sawalha 2010: 92) that were located on Hamra Street. Kassem, along with many writers and intellectuals of Beirut, frequented the Wimpy Café until it closed in the late 2000s:

maqhá wîmbī, al-kāfāy wîmbī...niñnā kunnā nā‘ad hunāk...hal-makān, ya’nī, anā katīr baḥbbu...niñnā...mish min zuwwār al-makān niñnā min muḥibbi al-maqāhī fī shārī‘ al-ḥamrā...natanaffus min ḥādhā al-maqhā...

28 Note that, in theory, nearly every reference to something “familiar” from the five senses could be called an “anchor.” As this would become quickly cumbersome, if not useless, I concentrate instead on the particularly familiar, evocative, or salient.
Wimpy coffeehouse, Wimpy Café...we used to sit there...this place I like a lot...we were not [just] visitors of the place, we were regulars [muhibbī, literally “lovers”] of the coffeehouses on Hamra Street...we took our breath from this coffeehouse.... (Kassem in personal interview on 4 November 2009)

In la'anat al-ghuyūm, Sāmī and Jamīla al-Nahār have coffee at maqḥā al-wīmbī al-jadīd مقهى الورمي الجديد 'The New Wimpy Café' (Kassem 1993: 27), discussed above in section 7.3, giving the reader familiar with Beirut something to hold on to--an anchor in reality. Similarly, Sāmī and Jamīla al-Nahār go on a date to a pizza restaurant on shārīʿ al-ḥamrāʾ al-jadīd شارع الحمراء الجديد 'New Hamra Street' (Kassem 1993: 62), a stand-in for the Hamra Street of 1993, a major venue for shopping and dining in the Ras Beirut area of Beirut, and, at the time, also still the Hamra of the remaining pre-civil-war cosmopolitan cafés.

Kassem also uses locations other than Beirut in la'anat al-ghuyūm as content-based anchors. Just as restaurants and locales within Beirut act as anchors for the Lebanese reader, so too can the names of countries near Lebanon. The Lebanese reader who has firsthand familiarity with Beirut is likely to have “news” familiarity with nearby countries and cities, that is, he or she is likely to hear the names of nearby countries and cities on news broadcasts or read them in newspapers on a regular basis. When those names appear in the novel, then, they add to the novel's plausibility. Kassem mentions six present-day states: Turkey, Iran, Lebanon, Syria, Jordan, and Iraq (Kassem 1993: 43, 83, 99, 105). He also mentions five present-day cities: Tehran, Ankara, Damascus, Tunis, and Amman (Kassem 1993: 109, 112-113, 116).
Kassem uses these location-specific content anchors only in *la’anat al-ghuyūm* (1993), establishing the city in the novel, *madīnat al-baḥr* مدينة البحر ‘Sea City,’ as Beirut or a stand-in for Beirut. In the three science fiction novels that followed, Sea City remains the setting, but he spends little time strengthening the Sea City-Beirut link. Occasionally, a regional location reference will appear in the later novels, such as *al-baḥr al-abyaḍ al-mutawассiţ* البحر الأبيض المتوسط ‘the Mediterranean Sea’ and *al-baḥr al-ahмар* البحر الأحمر ‘the Red Sea’ (Kassem 1995: 92), but this is rare, and it is never Beirut-specific. After *la’anat al-ghuyūm*, Sea City’s “Beirutness” is assumed.

Another content-based anchor Kassem uses in his novels is food. While out in *madīnat al-baḥr* مدينة البحر ‘Sea City,’ Sāmī and Jamīla al-Nahār eat *manāqīsh* مناقيش, which are “cheese or thyme pizzas commonly eaten for breakfast or as a snack” (Batal & Hunter 2007: S308). While available in many parts of the Arab world, they are traditional and common food in the Levant, to the point that families in Beirut have included the most basic version of *manāqīsh* in subsistence diets (Shaar & Shaar 1993). Other food in the novels, while not necessarily specific to Lebanon or the Levant, is equally familiar to the Lebanese reader. For example, common beverages appear a number of times: in a waiting room on the moon station, the four main male characters drink *līmūn* ليمون (Kassem 1993: 15), a beverage made of citrus-fruit juice; at *maqhá al-wīmbī al-jadīd* مقهى الومبي الجديد ‘The New Wimpy Café,’ Sāmī and Jamīla order two cups of coffee (1993: 27); and a *kūb min al-ḥalīb* كوب من الحليب ‘a cup of milk’ is mentioned more than once (1993: 59; 2001: 64). At other times, the descriptions of food are very detailed:

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29 *līmūn* can refer to lemonade, orange juice, or a mix of different citrus fruit juices.
...fa-lammā shāhādā al-nādil, khaffa li-yaḍa‘ amāma-nā kūbayn min al-līmūn itaba‘-humā bi-ṣaḥnayn min al-baṭāṭā al-miqliya wa-salaṭa al-khass wa-qiṭa‘tayn min al-laḥm...
...so when the waiter saw us, he rushed to put before us two cups of līmūn followed by two plates of french fries, a lettuce salad, and two pieces of beef.... (Kassem 1993: 9)

Such detail is not restricted to la’anat al-ghuyūm. For example, in jasad hārr (2004), there is an extended description of Jamīla al-Nahār's daily breakfast:

...thumma kūb mā‘ khalīṭ min al-azhār ka-al-misk wa-al-ṭayyūn wa-al-qaṣīn, ba‘da-hā ‘urūs min al-jibn wa-al-‘asl...

...Then a cup of water with a mixture of blossoms of feathered geranium, inula viscosa, and sage, and after that a pairing of cheese and honey.... (Kassem 2004: 13)

Sometimes, food is mentioned only in passing, yet with some specificity. For example, during dinner on the moon, Sāmī has ‘ilbatayn min al-qamḥ wa-al-shūfān ʿalibtin min al-fruit wa-al-shūfān 'two containers of wheat and oats' (1993: 21); the alien lights try to eat al-kāṭū the cake' while learning to use a fork and knife (1995: 69); and Sāmī finds grocery bags containing milk, cheese, and an egg when he emerges from his usual cold shower (1993: 57). What is uncommon in Kassem's novels seems to be a complete lack of specificity.

That is, he rarely says simply, “They ate lunch,” without adding some details of the meal.

Food familiar to a Lebanese reader is a notable content-based anchor-in-reality in Kassem's novels.

30 The familiarity of food can also be used in the opposite manner, to estrange the reader from the scene. In al-nihla, a processed meal of “protein” given to the main characters by the aliens while on the moon serves to emphasize their distance from home (Earth) to them and to the reader (1991: 49).
Kassem also uses the second type of anchor-in-reality, the language-based anchor. The primary way he accomplishes this is through the use of deixis (see chapter 7). According to Stockwell, deixis is important as an anchor-in-reality partly because the “conventional narrative patterns” (2000: 43) used in literature, including science fiction, depend upon the same deictic elements used in face-to-face conversation. For example, Kassem uses the past tense to present fictional actions and events that are occurring in a future period, a feature shared by all science fiction. His “[s]cience fiction thus borrows the normative form of recounting real experience to present its unreal universe plausibly” (Stockwell 2000: 43).

A second type of language-based anchor-in-reality that Kassem uses is fictive neology (see section 6.1.4). Fictive neology suggests that something “clever, advanced, and technological is happening” (Stockwell 2000: 117) because it suggests science, and science is perhaps the most important science fiction anchor-in-reality (see below, section 8.3). At the same time, neologisms are common in modern society, and, therefore, familiar and mundane. A neologism both introduces and domesticates a new concept or object. The idea that something one does not understand is presented using a word one has not seen is, paradoxically, a familiar situation. The unfamiliarity is thus familiar, and that familiarity is a reality anchor.

However, the science that the neologism represents is surely its most important aspect as it relates to science fiction. Science is the foundation of science fiction's plausibility and the primary tool used to establish or reinforce that plausibility. The topic of the next section is therefore the science in science fiction.
8.3. Relationship to science

8.3.1. The Relationship to Science in Science Fiction

Perhaps the most often used anchor in reality is what Stockwell (2003b) identifies as a third distinguishing feature of science fiction, “...a traditional association with the ideology of the scientific method...” (255), or, as Cranny-Francis (1998) terms it, the “fetishisation of science” (64). The requirement for science fiction to have a scientific element in its plausibility is so fixed that the collocations “scientific plausibility” and “scientifically plausible” are frequently found in discussions of the nature or definition of science fiction. For example, Patrouch (1974: xv), Cranny-Francis (1998: 64), and Wendland (1985: 15) all use these phrases or variations of them. For some scholars, the presence or absence of science in a literary work can move that work entirely in or out of the category “science fiction”: “This reference to science and/or technology is a key textual referent which marked the text as science fiction rather than Gothic” (Cranny-Francis 1998: 68).

Opinions among writers, readers, and critics regarding the quality of that scientific element vary considerably. Among science fiction writers, for example, there are a range of views regarding how rigorous their science needs to be (Csicsery-Ronay 2008: 129-130). In most cases, views in this debate fall into two main camps. One camp holds that the science in science fiction should be as accurate as possible. A notable early example is Jules Verne who “argued that...[his] science was accurate and took care to make it so” (Cranny-Francis 1998: 77). Similarly, Hugo Gernsback, the most influential
editor of the early pulp science fiction magazine era, imposed “supposed scientific accuracy” (Edwards 1993: 491) on his writers to such a degree that many stories concentrated almost entirely on the science or technology, resulting in what Wendland (1985) calls “the 'popular-mechanics' type of story” (13) and Asimov (1953) called “gadget science fiction” (171). John W. Campbell, Jr., whose early years as the editor of Astounding Science-Fiction from 1937 to 1945 define the “Golden Age” of science fiction, was famous for the level of scientific accuracy he demanded, writing that “the good science-fiction author takes the same sort of care with his background science that the good detective-fiction writer does with his local color” and therefore “[a] reasonably quick-minded reader of science fiction can readily pick up an astonishing fund of scientific fact from reading the stories” (Campbell 1946: ix). More recently, Patrouch (1974) writes that “work[ing]...within the limits of what science suggests in his own time” is “part of...[the science fiction writer's] voluntary self-discipline” (Patrouch 1974: xv). Writer Joanna Russ is very specific regarding what is and is not permitted:

An eminent critic (who knows better now) once asked me during a discussion of a novel of Kurt Vonnegut's, 'But when you get to the science, don't you just make it up?' The answer, of course, is no. Science fiction must not offend against what is known. Only in areas where nothing is known-or knowledge is uncertain-is it permissible to just 'Make it up.' (Even then what is made up must be systematic, plausible, rigorously logical, and must avoid offending against what is known to be known.). (Russ 1975: 114)

Most recently, the desire for scientific accuracy has been closely associated with the sub-genre “hard science fiction” in which “a relationship to and knowledge of science and technology is central to the work” (Cramer 2003: 187).
The second camp believes that the science of science fiction need not be particularly close to real science because it is nothing more than a thin veil for fantastic fiction, and science fiction itself is “nothing more than a new aspect of fantastic fiction” (Stableford 2005: xxxi). In this view, rigorous science is optional, and although “many s[ience] f[iction] writers employ scientific ideas scrupulously...there is no compulsion for them to do so” (Csicsery-Ronay 2008: 111). The same Hugo Gernsback who supposedly imposed “scientific accuracy” on his writers also wrote that “a writer of scientifiction [an earlier term for science fiction] is privileged to use poetic license...sometimes disregarding true scientific facts, although still retaining enough scientific accuracy to make the plot or story seem probable,” that is, plausible (Gernsback 1926b: 675). In any case, “...few are so broadly knowledgeable to have every detail in an SF work accurate” (Wendland 1985: 12). The aim is instead an “apparently scientific frame” to cover up the “fantasy posing as realism” (Wendland 1985: 11). As Cranny-Francis (1998) states plainly, in science fiction science, “...accuracy is not necessary” (78).

In every case, however, the science of science fiction is a sham, “a pose” (Wendland 1985: 16). No matter how closely a science fiction author adheres to real science or how scientifically accurate the writing is, science fiction science is not real. In fact, this is a requirement: “The science of sf must violate known science if it is to be science-fictional...” (Csicsery-Ronay 2008: 128). Instead, it is “suspended science” (Csicsery-Ronay 2008: 130), “…an image of science, a poetic illusion disguising its illusionary status” (Csicsery-Ronay 2008: 111). Whether rigorous in its use of science or
not, science fiction is fiction, and “the science of science fiction...is primarily fiction rather than science” (Cranny-Francis 1998: 74).

At the same time, despite its requisite falsity, the science of science fiction is the ultimate anchor in reality because a reader in the modern world daily places his or her faith in “science” and its applied guise, technology, as an explanation for otherwise inexplicable occurrences (Csicsery-Ronay 2008: 116-119). For example, few people could explain with any great facility the precise method used to store thousands of pages of text on a thumbnail-sized electronic storage device. Instead, the average person sees the results and uses “science” as a stand-in for a more complex explanation. This is the nature of a modern, specialized society: “...most readers, even highly educated nonscientists, lack the knowledge and desire to be equal partners in verifying statements about string theory and brain chemistry” (Csicsery-Ronay 2008: 114), meaning that “a nonprofessional public is in general unable to distinguish between true and imaginary science...” (Csicsery-Ronay 2008: 142). Thus, science fiction science enables a reader to believe the fantastic because it uses the dominant paradigm of explanation in modern society, science, to explain the otherwise inexplicable, thereby “help[ing] him in every possible unobtrusive way to domesticate the impossible hypothesis” (Wells 1934: viii quoted in Csicsery-Ronay 2008: 113). In this sense, science stands in for the explanations once provided by religion or the explanations provided by magic in other genres of the fantastic. Indeed, science is often the only culturally acceptable explanation for the inexplicable or difficult to explain: “...what is identified as science and technology in a rationalist society is a research practice and material application of abstract principle
which corresponds to rationalist thought; anything else is superstition or magic and not authorised” (Cranny-Francis 1998: 77).

As with all anchors in reality, the methods of demonstrating a relationship to science range from simple to complex, and like other anchors in reality, the methods fall into two categories, language-based and content-based. One method, the content-based method, makes reference to objects of applied science, that is, technology (Stableford 2005: xxix). This may include reference to science fiction technology tropes, such as the time machine, to technological aspects of the iconography of science fiction, such as the spaceship, or to other “common fantasies of science or technology which might be described as the technological or scientific imagination” (Cranny-Francis 1998: 77). The content-based scientific anchor gives the reader a discrete entity in which to believe science is at work, permitting extraordinary occurrences to be “downgraded” to something unusual but plausible (Stockwell 2000: 164-165). As Card puts it sardonically, “If you have people do some magic, impossible things by stroking a talisman or praying to a tree, it's fantasy; if they do the same thing by pressing a button or climbing inside a machine, it's science fiction” (Card 1990: 23). “Flying car,” or even “flying machine,” implies an extrapolated technology connected to recognizable contemporary technology that allows the reader to construct a logical, scientific explanation or justification of the non-existent technology in a way that “flying carpet” does not, even though that carpet could reasonably be flying because of a far-future technology. In that case, the author would need to give the reader more of an explanation—the reader can only be expected to
“give” so much. The actual accuracy is unimportant. As an anchor in reality, the importance lies in the perceived accuracy.

A second and equally common method of demonstrating a relationship to science is language-based. This method revolves around scientific explanation, whether complex or otherwise. According to Clement (1953), there are four techniques to “toy with scientific truths,” that is, link science to science fiction, ranging from the simple use of “jargon” and “doubletalk” to the construction of an elaborate “spectacular, implausible environment” that the writer builds while still using known science (Clement 1953 quoted in Csicsery-Ronay 2008: 114). However, it is the presence of a scientific explanation, more than its success, that functions as the textual link to science. That is, all four techniques can be reduced to the use of scientific language as a connection to science. As Wendland (1985) suggests, “Most...[readers] find a paragraph or two of rhetorical terminology satisfactory...” to demonstrate a relationship to science (Wendland 1985: 14-15). H.G. Wells similarly acknowledged “that the scientific discourse seemingly at the heart of scientific romance [the term Wells used for his era's science fiction] was a particular form of rhetoric he called 'scientific patter'...” (Csicsery-Ronay 2008: 113). This rhetoric of science in science fiction is virtually synonymous with the scientific aspects of the military-scientific register that is a formal feature of science fiction (see section 6.1.6).
8.3.2. The Relationship to Science in Kassem Kassem's Novels

8.3.2.1. Evidence from the Novels

Kassem's novels demonstrate a relationship with science in a number of ways. First, Kassem uses content-based methods to demonstrate that relationship through examples of advanced technology. The most common example in the novels *lamasat al-ḍaw’* and *jasad ḥārr is al-sayyāra al-ṭā’ira* 'the flying car.' The flying car is used regularly but nonchalantly, just as any automobile might be used today. Similarly, *al-hātif al-mar’īyy* 'the visual telephone' is used regularly, just like any piece of consumer technology in today's world. A third common example is the spaceship, which is used for both transport and, in *la’anat al-ghuyūm*, to battle the clouds of pollution. Although the spacecraft are used to move characters in or through space, an unusual occurrence in today's world, it is done so in a manner analogous to more mundane activities, like taking a bus or, in the case of the anti-pollution spacecraft, like an aircraft seeding clouds for rain. In these and other instances, the reader is introduced to objects that allow characters' to accomplish the unusual or fantastic, but because those objects are introduced as technology, that is, applied science, the explanation "science" is the implicit explanation for the objects' abilities, just as it is when familiar technology allows one to do something in the modern world.

Kassem also uses language-based methods to demonstrate the novels' relationship to science. One way he accomplishes this is through the use of the military-scientific

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31 While this sounds very much like the software application Skype, Skype was not created until 2003, well after Kassem's first use of the term and concept. It is more likely he borrowed the concept from older science fiction literature or film.
register. As discussed in section 6.1.6, the military-scientific register is one of the pulpstyle features that became part of prototypical science fiction. As discussed in section 6.1.6.2, it is present in Kassem Kassem's novels. More specifically, the scientific elements of the military-scientific register establish the link to science: the presence of scientists, the “syntax of logical reasoning” (Stockwell 2000: 86), and the presence of “dates...numerical measurements, and technical terms...” (Stockwell 2000: 87).

In addition to the military-scientific register, Kassem uses more general scientific language to demonstrate a relationship to science. That is, he uses language that is scientific but does not meet all the requirements of the military-scientific register. One example in la’anat al-ghuyûm is from a conference on climate change held on the moon early in the novel. Marwân Shâhîn, one of the protagonists, delivers the first part of the Terrestrial-Environmental Center's presentation:


If carbon gas doubles, for example, and necessarily its source is “commercial industries,” then the temperature of the air will rise, and, as you know, it is enough to melt a small portion of the “ice” regions, thus raising the sea level several meters, and 75% of human communities are built below sea level. (Kassem 1993: 16-17)

Perhaps the most important phrase in this excerpt is kamâ ta’lamûn ‘kama tâlûna ‘as you (pl.) know.’ While the rest of the excerpt teaches the reader scientific or pseudo-scientific
facts--the difference is irrelevant to establishing the relationship to science--the phrase “as you know” subtly tells the reader that the fictional scientists at the conference to whom the presentation is addressed already believe these facts to be true. This agrees with Stockwell’s (2003b) description of such teaching moments in pulpstyle:

...the person being informed is almost always in the same situation as the speaking character and would already know all the facts being presented. Nevertheless it shows an awareness on the part of the author of the need for instantiation of certain scientific schemas in the minds of readers. (Stockwell 2003b: 262)

That real, non-fictional scientists also accepted these facts at the time of the writing of the novel only adds to the plausibility of the novel and evokes the “almost pedagogic dimension [that] has been an aspect of the [science fiction] genre from the beginning” (Stockwell 2003b: 262).

Afterward, another member of the team, Shawqi Sa‘id, delivers the second part of the presentation:

Your industries threaten the Earth because they emit 5.7 tons of carbon in the world [or “per year”], that is, the countries of the north are responsible for poisoning the countries of the south. The main problem is the poisonous gas because [outer] space is penetrating into the erosion and the accursed gap in the ozone layer continues to widen. (Kassem 1993: 17-18)

---

32 In the Arabic, there is only a one-letter difference between fi al-‘alam ‘in the world’ and fi al-‘ām ‘per year.’ Because “5.7 tons of carbon per year” would make more sense, perhaps this is a typographical error.
This passage contains a number of the features Stockwell cited as part of the pulpstyle register in Stockwell (2000: 88). There is “scientific description” in the specification of how much carbon is released by industries each year and mention of the widening hole in the ozone layer. There is “awareness of the state of knowledge of the reader” in the inclusion of the clause following the word *ay* أي ‘that is.’ That second clause explains the political significance of the scientific description in the first clause of the sentence to the reader who is likely from “the countries of the south.” There is “rational discussion,” both in the aforementioned clause beginning with “that is” as well as in the sentence beginning with the phrase *al-mushkila al-ra’isiyya hiya* المشكلة الرئيسية هي ‘the main problem is.’

Finally, there is an “emotional element” that can be seen in the use of the words *tasmi‘* تسميم ‘poisoning,’ *sām* سم ‘poisonous,’ and especially *lu’na* لنة ‘accursed.’ All of these are features from the pulpstyle register, and the pulpstyle register is the basis of the prototypical military-scientific register.

One example of scientific language in the later novels is in *jasad ḥārr*:


“Madam, the greatest length of time that anyone attempted to measure is the longevity of the proton, which exceeds 10¹⁰ of it, and the longest time anyone measured precisely is the length of the age of the universe, which is about 16
billion billion years. The shortest time measured indirectly is the time of decay of some elementary particles, which is $10^{12}$ seconds, and the shortest time which can be measured directly is the time of bursts of light in special lasers, which reaches $10^{13}$ seconds, and thus is in a “nano”\(^{(1)}\) [i.e., a nanosecond]. (Kassem 2004: 23)

This passage is an excellent example of the “scientific patter” of which Wells wrote.

First, the use of exponents with the number “10” seems to suggest the use of scientific notation, but it is not actually scientific notation: there is no coefficient, nor is the exponent negative when talking about fractions of a second. This might be typographical error, but, as Broderick (1995) points out, it is often difficult to discern science fictional language from printing errors (58). Next, the final superscript is confusingly a footnote, not an exponent, but this does not make it less scientific. On the contrary, a footnote evokes scholarly literature, and the footnote itself, a definition of the word

\[nānū\thāniya\] 'nanosecond,' is non-fictional information for the reader. Finally, the reference to the age of the universe, 16 \[bilyūn\ milyār\ sana\] 16 بليون مليار سنة seems to mean “16 billion billion years,” that is, 16 quintillion years, because both \[bilyūn\] بليون and \[milyār\] مليار mean “billion” as it is used in U.S. English (Badawi, Carter, & Gully 2004: 267). This age is considerably greater than current scientific estimates, which range from 9 billion years to 18 billion years (Behr 2002). Similarly, the “longevity of a proton” is, at least theoretically, an extremely large number, but “\[10^{1}\] of it” is meaningless, even if \[minhu\] مئة ‘of it’ is a misprint or typographical error; \[10^{30}\] years is a current estimate (Fields 2002). The point of the passage seems to be that science has attempted to measure time, rather than attempting to convey any real information about those attempts at measurement or the measurements themselves.
In addition to the evidence from the novels themselves, others have noted in
epitextual publications the scientific language in Kassem's novels. One of Kassem's
interviewers makes it clear that he believes that Kassem's work, at least at the time of
laʿanat al-ghuyūm, is perhaps overly thick with scientific writing:

في الرواية ثمة ما يشبه «صدقات» التي يواجهها القارئ: تقارير لا تنتهي ولا يفهم منها شيء. مشاهد فيها بعض
الحماس لكنها مبتورة. تداخل بين الحب والجنس (بصورة هشة) وبين الجانب العلمي الذي يكاد يختفي في بعض
غموض. تعبير علمي غير مفهوم أو ربما مشاهد علمية بحتة. الندوات العلمية والمناقشات ما أن تبدأ حتى تنتهي
سريعا...

فِي الْرِّيَاْيَا ثَمَّةْ مَا يِشْبِهْ «صَدْمَاتِ» الَّتِيْ يِواَجِهُ للْقَارِئُ: تَقَارِيرُ لَا تَنْتَهِي وَلَا يَفْهُمُ مِنْهَا شَيْءٌ. مَشَاهَدُ فِيهَا بَعْض
الْحَمَاسِ لَكِنْها مَبَتُوْرَة. تَدَخِلُ بَيْنِ الْحُبِّ وَالجَنْسِ (بَصُورَةٍ هْشَة) وَبَيْنِ الْجَانِبِ الْعَلْمِيِّ الَّذِيْ يَكَادْ يَخْتَفِيْ فِي بَعْض
غَمْوُض. تَعْبِيرُ عَلْمِيِّ عِيْنِ مَفْهُومٌ أَوْ رَبَّا مشَاهِدَ عَلْمِيَّة بَحْتَة. النَّدُوَاتُ العَلْمِيَّةُ وَالْمَدْارِشاتُ مَا أَنْ تُبْدَا حَتَّى تُنْتَهِي
سَريَاّ...

In the novel, there are “shocks” which the reader confronts: unending or
incomprehensible reports; scenes which contain some enthusiasm but which end
prematurely; mutual interference between love and sex (portrayed delicately), and
between the scientific aspect, which almost disappears in some
ambiguity; scientific expressions which are incomprehensible or which are
perhaps purely scientific stage-dressing; scientific seminars and discussions
which, no sooner have they begun than they end suddenly... (Jarjūra 1993)

Whether the scientific parts of the novel obscure plot points, or whether “scientific
expressions...are incomprehensible,” is irrelevant to establishing the novel's relationship
with science. Their very presence creates that relationship.

Kassem Kassem himself addresses the scientific relationship of the first novel
studied here, al-rihla (1991), in a newspaper interview following the publication of that
novel:
[Interviewer] hal nastaṭī al-qawl inna al-maʿlūmāt al-ʿilmīyya al-mawjūda fī «al-riḥla» maʿlūmāt ṣaḥīḥa?


[Interviewer] Can we say that the scientific information in al-riḥla is correct information?

[Kassem] There is no doubt that I compiled this information from its sources, and I collected it according to the place that I wanted to visit, like the moon or Mars. Despite the assertion that al-riḥla was realistic in the scientific sense, I did not want it that way. In fact, I tried to compose it as fantasy, but the considerations which science placed on the atmosphere on the moon or Mars, that is, how the sun rises and sets, the presence of the two Martian moons, etc. ... from here the novel became a fiction novel transformed into scientific reality. The novel became a theoretical utopia. (Qāṭāyā 1992)

Regardless of Kassem's original intent, one comes to two conclusions from this excerpt.

First, both the interviewer and Kassem acknowledge that there is scientific information in the novel. This is one level of the relationship to science. Second, Kassem makes it clear that he felt compelled to be correct in the use of science, or at least as correct as he felt al-ḥaythiyāt 'the considerations' forced him to be. This is a second and stronger relationship to science.
8.4. Extrapolation

8.4.1. Extrapolation in Science Fiction

The final feature Stockwell (2003b) cites as a distinguishing feature of science fiction is “...a technique of logical extrapolation from the current state of knowledge” (254-255). In the study of science fiction, extrapolation “is used to mean the technique of basing imaginary worlds or situations on existing ones through cognitive or rational means...” (Wolfe 2005: 16). More specifically, extrapolation is when an author “looks for trends in the society of his [or her] day and extends the pattern into a hypothetical future” (Attebery 1992: 106). More simply, it is a technique of writing a story which finishes the sentence, “If this goes on...” (Samuelson 1993: 199).

As with science and the scientific method, authors and critics do not agree completely on how strict the extrapolation must be or on how important extrapolation is to science fiction and its definition. Campbell argued at one point only that “many of its [i.e., science fiction's] stories are extrapolations of known science into future engineering” (Campbell 1946: ix), but soon after wrote that extrapolation was a necessary attribute of science fiction (Campbell 1947: 91). However, if it is a necessary attribute, it is certainly not sufficient: extrapolated “versions of the future also include works of futurology, astrology, weather forecasting, TV listings, almanacks, tide tables, train times, and horse-racing odds” (Stockwell 2000: 18). Similarly, a “logical puzzle” aspect of extrapolation is shared with detective stories, the difference lying in the “open-ended” nature of science fiction extrapolation versus the “closed” nature of the detective story (Stableford 2005: xliii). More measured assessments of extrapolation's place in
science fiction assert that it is “one of the most common characteristics cited in discussions and definitions of science fiction...” (Wolfe 2005: 16) or that all science fiction “ought to have...this kind of expansive potential” only available through extrapolation (Stableford 2006: 176). In any case, one can see the importance of extrapolation to science fiction and science fiction studies in the title of the first scholarly journal of science fiction studies, Extrapolation.

An extrapolation is composed of two parts, the extrapolation itself and the knowledge or information on which it is based. The extrapolation itself is the logical partner for the “future” requirement in prototypical science fiction (see section 7.3). The “future” is merely a location, and it requires something to fill it; extrapolation has to be located in a time, and that time must follow the present. As Stockwell (2000) puts it, “...those futures...that are set along the future time line of our real world...are serial versions of the future...” and “...serial science fiction is extrapolative...” (Stockwell 2000: 17). Additionally, the focus or complexity of the extrapolation can range from technology and “future engineering” (Campbell 1946: ix) to “expansive story lines that continue to draw out further consequences of a hypothesis” (Stableford 2006: 176). This latter sort of science fiction, which pushes the extrapolation further to examine the effects of science on humans, constitutes “prophecy stories” in Campbell's (1946) terminology or “social science fiction” in Asimov's (1953).

For the purpose of examining plausibility and alternativity, perhaps the most important part of the definition is not the extrapolation itself, but the fact that it is based on, or proceeds from, current knowledge or science. That is, because extrapolations are
“...clearly an outgrowth of trends visible in [one's current time]...” (Wolfe 2005: 16),
“They are thus historicised notions, relative to a point in time” (Stockwell 2000: 18).
Because of this aspect, extrapolation is yet another anchor in reality in that it ties a
fictional future and its trappings to the actual present of the writer and intended reader.
The extrapolation tethers the fantastic elements to the non-fictional aspects of the
intended reader's world by limiting the fantastic elements to what one could reasonably
“see” or explain from the vantage of the present day (Stockwell 2000: 18).

Demonstrating logical extrapolation in science fiction, much like demonstrating
sound changes or morphological changes in historical linguistics, involves comparing
two versions of the same object from two different historical periods (one of which is
fictional in science fiction), determining what changes have taken place, then surmising
how those changes might have taken place. Science fiction authors may, but often do not,
specify how certain changes occurred. In most cases, the extrapolation itself is implicit.

8.4.2. Extrapolation in the Novels of Kassem Kassem

Kassem Kassem's novels include a number of examples of scientific
extrapolation. In one instance in *lamasat al-daw’*, Kassem refers to a vehicle called the
*Nomad Explorer* that “succeeded in transforming the dream of waters into a reality”
(Kassem 2001: 8). The *Nomad Explorer* was the name engineer Madhu Thangavelu gave
to a lunar water extraction vehicle that he designed. However, the *Nomad Explorer* was
only a concept; it has never been built (Wilson 1998). Kassem read about this concept in
a translated science text (Kassem in personal electronic mail message on 29 April 2009).
In citing its “success” in his novel, Kassem extrapolated the steps one would take if lunar settlement took place: the building, the deployment, and eventual use of the *Nomad Explorer* on the moon.

Another example of scientific extrapolation that is in Kassem's novels, but difficult to discern without paratextual information, is rising ocean levels. In the novels *lamasat al-ḍaw’* (2001) and *jasad ḥārr* (2004), flying cars are the prevalent means of transportation in and around Sea City, and in *lamasat al-ḍaw’*, Kassem mentions *al-maṭ'am al-ṭā'ir* 'the flying restaurant' (Kassem 2001: 28). Kassem says in his interview with me on 4 November 2009 that he intended the use of flying cars to be a necessity resulting from the rising ocean levels flooding lower-lying cities, a possible outcome of global warming discussed extensively in *la’anat al-ghuyūm* (1993). It seems that Kassem looked at the information regarding global warming, then extrapolated an eventual outcome: rising ocean levels that have flooded lower-lying cities, forcing the use of less terrestrial forms of travel.

Another kind of extrapolation that appears in Kassem's novels is political extrapolation. Just as scientific extrapolation takes current scientific findings and imagines how they might logically be applied in the future, other types of science fiction extrapolation “plot...a believable course of events from currently held or currently plausible social, economic, and political conditions” (Wise 2008: 293). One type of such extrapolation is political extrapolation. In Kassem's novels, there is only one instance of this sort of extrapolation. The novel *la’anat al-ghuyūm* (1993) contains the following paragraph:
As usual, we returned to the hotel to make the calls which had become routine. Basil told us that the states of Syria, Jordan, the Bank, and the Strip had agreed to reforesting all of the lands under their control, and [he also told us] that an upcoming visit will take place to coordinate with the municipalities.... (Kassem 1993: 99)

The key extrapolative element is the list of “states.” The word for “states,” duwal دول, is only used in Modern Standard Arabic for independent, sovereign political entities. The first two states on the list, Syria and Jordan, are typical examples of a state. The last two, however, are not. In a modern political context, the entities that the terms al-diffa القطاع 'the bank' and al-qitā' القطاع 'the strip' typically refer to are al-diffa al-gharbiyya الغربية 'the West Bank' and qitā' ghazza غزة 'the Gaza Strip,' often collectively called the Occupied Territories. Neither was considered a state at the time of the novel's publication, either individually or collectively. It appears that Kassem looked at the events of the First Intifada of the late 1980's and early 1990's and the peace initiatives that followed and concluded that one possible outcome might be two separate, independent states rather than a single Palestinian state.

8.5. Conclusion

One aspect of the “rhetorical structure of a genre” (Frow 2005: 74) is the “truth status that is to be attributed to what is being talked about” (75). From Stockwell's
definition of the “truth value status” of science fiction (2003b: 254), one can derive four attributes of this science fiction truth status: (a) alternativity; (b) plausibility; (c) a relationship to science; and (d) “extrapolation from the current state of knowledge…” (Stockwell 2003b: 254-255). Kassem Kassem's novels al-rihla (1991), la'anat al-ghuyūm (1993), ḥadatha an ra'á (1995), lamasat al-ḍaw’ (2001), and jasad ḥārr (2004) all demonstrate that they contain these four attributes.
9. Conclusion

9.1. Discussion

This dissertation confirms that Kassem Kassem’s novels are science fiction of a type very similar to that with which a reader of English-language science fiction, a viewer of English-language science fiction films or television programs, or a scholar of English-language science fiction is familiar. First, the review of secondary literature in Arabic demonstrates that the concept of science fiction among scholars in the Arab world is very similar to the concept as it has developed among scholars writing in English. The scholars grapple with the same problems of defining the genre, and the attempts at definition use very similar concepts (science, technology, the future, etc.), often addressing definitions and concepts from European languages.

Second, the close examination of five of Kassem Kassem’s novels using a definition based on prototype theory demonstrates that each of the five novels studied here has features of prototypical science fiction. The features found in each novel are summarized in table 9.1.

Table 9.1 - Features of prototypical science fiction in five Kassem Kassem novels

<table>
<thead>
<tr>
<th>Thematic Content</th>
<th>al-riḥla</th>
<th>la’anat al-ghuyūm</th>
<th>hadatha ar-ra‘ā</th>
<th>lamasat al-daw’</th>
<th>fasad ḫārr</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2. The Icon of the Spaceship</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5.3. The Icon of the Alien</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5.4. The Icon of the Transformed Human</td>
<td>No</td>
<td>Maybe</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>5.5. The Icon of the Robot</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>al-riḥla</td>
<td>la’anat al-ghuyūm</td>
<td>ḥadatha ar-ṣa‘ā</td>
<td>lamasat al-ḍaw‘</td>
<td>fasad ḥārr</td>
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<tr>
<td><strong>Formal Organization - Pulpstyle features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.1.1. Short-story format</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.2. Titles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Form (noun + modifier)</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>- Function (plainly descriptive)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.3. Character names and naming</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1.4. Fictive neology</td>
<td>Yes</td>
<td>Yes (&amp; greatest number)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6.1.5. Narrative focalization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Third-person narration</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>- Focalization through main character</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>- High density of direct speech</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>6.1.6. Military-scientific register</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Using Halliday’s (1978) field, mode, tenor</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>- Using lexicogrammatical features</td>
<td>Partly</td>
<td>Yes (&amp; best examples)</td>
<td>Partly</td>
<td>Partly</td>
<td>Partly</td>
</tr>
<tr>
<td><strong>Formal organization - Deixis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1. Perceptual deixis used to establish non-humans as characters</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>7.2. Spatial deixis used to establish extraterrestrial settings</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>7.3. Temporal deixis used to establish future setting</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Rhetorical Structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.1. Alternativity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>8.2. Plausibility</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>8.3. Relationship to science</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Each of the five novels studied here has many of the features of prototypical science fiction. In terms of formal features, *la’anat al-ghuyūm* is the most prototypically science fictional of Kassem Kassem's novels. However, in terms of thematic content, that same novel lacks three of the four prototypical icons of science fiction: the robot (which all of the novels lack), the alien, and the transformed human. Many features are absent, or at least less prominent, in Kassem's later three novels when compared to his earlier two. This may be a reflection of Kassem's view, expressed in at least one interview, that he has “married science and drama, neutral scientific thought and excited literary thought” (al-Miṣriyy c2004), leaving some of the features of science fiction aside in favor of features more common in mainstream fiction.

Another possible reason for the differences is suggested in the evolution of the form and function of the novels' titles. The first two titles fit into the pulpstyle mold, that is, the prototypical mold, while the last three are more like New Wave titles (see section 6.1.2). Similarly, the last three novels have fewer neologisms, a feature of New Wave science fiction that focuses on examination of the self (Stockwell 2000). Taking this as a starting point, one might surmise that Kassem has been experimenting with writing different types or styles of science fiction. While he may be trying the different styles at random, it is conspicuous that the changes in his novels over the last 20 years have paralleled those that have occurred in the English-language tradition over the last century and a quarter: *Al-riḥla* is a fantastic journey in the tradition of Wells or Verne; *la’anat al-ghuyūm* is also a fantastic journey; *hadatha an-ra’ā* is a fantastic journey that is a bit more like the New Wave, focusing on internal examination; *lamasat al-daw’* is a fantastic journey that is more like mainstream fiction, and *jasad ḥārr* is a fantastic journey that is a bit more like the New Wave, focusing on internal examination.

<table>
<thead>
<tr>
<th>Extrapolation</th>
<th>al-riḥla</th>
<th>la’anat al-ghuyūm</th>
<th>hadatha an-ra’ā</th>
<th>lamasat al-daw’</th>
<th>jasad ḥārr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
ghuyūm is a pulpstyle-period adventure; and hadatha an raʿā, and especially lamasat al-
ḍawʿ and jasad ḥārr are New Wave-like considerations of being and relationship. If one
assumes this development will continue on a similar course, one might surmise that his
next works will be written in the cyberpunk style or subgenre.

Other parts of the chart may indicate more aspects of Arabic science fiction
generally. The Arab names that Kassem chose for the majority of his characters suggest,
at a minimum, that characters in other Arabic science fiction might be predominantly
Arab. Snir’s (2000) examination of one of Nihād Ṣharīf’s short stories (1981), in which
the main character is Egyptian, supports this idea. This is in contrast to, for example, the
German Perry Rhodan science fiction series in which the main character is American and
the supporting cast is “internationalize[d]” (Nagl 1981: 32). The presence of Arab
characters may also suggest that Kassem and other science fiction writers in the Arab
world are trying to create a fuller Arab context for their science fiction. This theory is
supported by the location for the events of Kassem’s novels when they occur on Earth:
Beirut, in its Sea City guise (see section 8.2.2). All of this suggests that Kassem, and
perhaps other authors, are trying to create not only Arabic science fiction but also Arab
science fiction.

The Arab character and place names in Kassem’s novels further suggest that his
science fiction, and perhaps other examples of Arabic science fiction, contain other
culturally specific attributes, the “distinctive features that reflect different national
preoccupations” to which Alkon (1994: xiii) refers. That is, the Arab context that the
science fiction authors create might be an indication of other culturally specific aspects of
the text, such as themes, topics, or points of view, that Arabic science fiction authors and texts create. What these attributes might be is another question requiring further study.

It is also of note that the category that demonstrates the most divergence from prototypical features, the pulpstyle features of formal organization, is also the most external or superficial of the subcategories. Thematic content involves more ideas than external features, more function than form, and this is even truer for rhetorical structure, which is more abstract. One can conclude that there are parts of science fiction that simply do not change among cultures, parts that are necessary but not sufficient for someone familiar with English-language science fiction to call something “science fiction.”

One additional notable topic is not visible in the table nor is it part of prototypical science fiction: religious content. There is no religious content of any kind in Kassem’s science fiction novels; the world he has built is evidently secular. While much science fiction in English at least addresses religion, whether rejecting it, criticizing it, or accepting it in its various manifestations (Mendlesohn 2003), and other Arabic science fiction from inside and outside Lebanon addresses religion (see below, section 9.2), Kassem has chosen not to mention it in any way. It is conspicuous that novels portraying a future Lebanon, a country often defined in terms of its religious sects and sectarianism, include no mention of any aspect of religion.
9.2. Areas for Further Research

In examining Kassem Kassem's novels using a form of genre theory, I have established a bridge from science fiction studies as it has developed in English to works of science fiction in Arabic. Now that that is accomplished, the door is open to use Arabic scholarly literature on science fiction alongside scholarship in European language and to examine Arabic science fiction using the same techniques as are used on science fiction in European languages. Therefore, the next logical step is the further application of the tools and theories of science fiction studies to Arabic-language works.

Further possible study of Arabic science fiction seem to fall into three broad categories:

1.) **Comparative studies.** Snir’s (2000) work could be continued, using his model or another to look at science fiction from across the Arab world and create a typology of Arabic science fiction. Do themes vary by country? Do features vary by country? Does fictive neology differ from country to country, or simply author to author? One could also address the place of science fiction in the broader context of Arabic literature, an issue that Snir (2000) has touched on, or the place of science fiction in the national literature of the various Arab communities.

One topic that could be addressed in a comparative study is religion. Although Kassem’s novels contain no reference to religion, this is not the case in other Arabic science fiction. At a minimum, some writers make use of religious language. For example, Ashraf Iḥṣān Faqīh’s mission control character in the story *li-yajma‘ al-khurda*
To gather scrap metal' says, “In the name of God, the merciful, the compassionate,” before asking an astronaut if he is ready for the countdown to launch (Faqīh 2006: 50). In terms of religious themes, one early Egyptian science fiction novel by Yūsuf al-Sabā‘ī (1970), for example, revolves around the transformation of a race of trees into people, and their subsequent need for a prophet to guide them (ʻAzzām 2000: 24-25). Even Lebanese science fiction writers other than Kassem address religion. For example, in the novel ghubār fī al-faḍā’, religion seems to be a central topic (ʻAbd Allāh & Šafā 2008). As the question of religious content in Arabic science fiction is probably the third most common question posed to me about Arabic science fiction, an exploration of this sort would be well received.33

2.) Individual author studies. Thus far, in addition to this dissertation, only one book has focused on multiple works of a single author, the works of Ṭalib ʻUmrān in ʻAzzām (2000). An excellent candidate for further analysis would be Ṭība al-Ibrāhīm, a Kuwaiti author whose science fiction novels, according to Ṭalib ʻUmrān, “have focused on women's ability or the potential for women to be independent of men” (BBC Arabic interview with Ṭalib ʻUmrān, 4 March 2007). ʻUmrān's description suggests al-Ibrāhīm's novels could be examined as feminist science fiction in the tradition of the works of Joanna Russ.

Further study of Kassem Kassem's works would also be fruitful. While this dissertation has addressed science fictional features of Kassem's novels, it has devoted

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33 The most common question is “They have that?” or “We have that?”, depending on who asks the question. The second most common question is “What is it like?”, a question I have tried to answer in this dissertation.
little analysis to thematic issues. For example, for works that participate in a genre known for its overt or latent militarism, Kassem's works have little “war” in them. There is certainly conflict between humans and nature, and philosophical and political conflict between the developed and developing states, but there is no open hostility. One of the reviewers of la’anat al-ghuyūm describes the world Kassem builds: “...an imaginary world that is more prosperous, peaceful, and secure. It is a world devoid of war and conflicts, so the only legitimate war is against pollution, and the [only] conflict for the sake of preserving the environment” (Dakrūb 1994). Given that the novels were written in the decade after the Lebanese civil war, this topic invites deeper analysis.

3.) Issue studies. One could examine the views of the relationship of the developed world and developing world in Arabic science fiction. Both la'anat al-ghuyum and Ṭalib ‘Umrān's al-azmān al-muẓlima (2004) address this relationship (Ayed 2006). Another possibility would be a study of environmental issues, using la'anat al-ghuyum as a starting point. Science fiction in English has a history of addressing such issues (Buell 2005), so one might also undertake a comparative study of the treatment of environmental issues in Arabic and English-language works.

9.3. Conclusion

In this dissertation, I have constructed a framework for the comparison of Anglophone ideas of science fiction with Arabic science fiction. First, I developed a model of the science fiction genre as it exists in the Anglophone science fiction discourse
community. Then, I examined definitions of science fiction in Arabic science fiction criticism. Third, I found five Arabic novels that identify themselves as science fiction through genre cues. Fourth, I used the Anglophone science fiction model I developed to examine those five Arabic novels.

I have firmly established that at least one author of Arabic science fiction writes a type of science fiction that not only bears a great deal of resemblance to science fiction as it has developed in the Anglophone science fiction discourse community but also demonstrates many of the features of prototypical science fiction. This finding is of consequence for two reasons. First, while it is dangerous to claim that this single finding applies to all or even most science fiction written in Arabic, one must take this finding into account when performing any further examination of Arabic science fiction works. If Arabic science fiction is similar to Kassem’s novels, and some of the individual similarities mentioned above (section 9.1) suggest that it is, then one can apply the full panoply of tools found in English-language science fiction studies to Arabic science fiction. Further research on Arabic science fiction must build on the firm foundation established in this dissertation.

Second, if other Arabic science fiction resembles Kassem Kassem's science fiction, it should be fairly easy to integrate Arabic science fiction and science fiction criticism in Arabic into the broader context of science fiction studies. While this integration could be as one of the “international” species of science fiction, alongside Chinese and French science fiction, for example, it is more appropriate to examine it as a member of the mainstream community, alongside Commonwealth science fiction and the
few non-English-language authors, such as Stanislaw Lem, who are “full members” of
the canon. The fact that Kassem’s science fiction is not as esoteric or removed from
prototypical science fiction as one might initially guess should encourage the science
fiction studies community to include non-English-language science fiction in its
mainstream examinations and analysis rather than marginalize it under the label of global
or international science fiction. Including such science fiction does not entail expanding
the definition of science fiction or otherwise watering down science fiction studies with
extra-generic material. On the contrary, the science fiction examined in this dissertation
demonstrates that some international science fiction fits firmly in a model constructed
using the most accepted and widely understood aspects of science fiction.
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