8 Conclusion

The aesthetic theory in Chapter V of A Portrait is developed in terms of the three stages of apprehension—wholeness, harmony, and radience—inherent in all acts of perception. At times, however, the experience of apprehension achieves a level of intensity that marks a clear transition from one level of personality development to another, from one organization of the data of experience to a different organization. This transition Stephen describes in Chapter V as a moment of "enchantment of heart"; he makes no clear distinction, however, between the level of emotional intensity associated with epiphanic experiences and that inherent in all acts of perception. In the introduction, I suggested that the problem could be resolved by a close scrutiny of the imagery of the novel. Images, when interpreted as any datum of sensory experience, constitute the matter of apprehension. There is reason to infer from Stephen's discussion with Lynch that at those moments of true radiance there will be large concentrations of sensory impressions. As the individual becomes

increasingly aware of these impressions—his environment and his relation with it—his level of emotional or empathic involvement increases and he in turn becomes even more receptive. The result is a spiraling build-up of intensity that can, if sustained, result in epiphany or major redefinition of the basic personality in which patterns of association among the memory components of previous experiences are significantly altered. Thus, we would expect a quantitative relation between concentrations of important images in the text and the dramatic moments of epiphanic experience.

To test this suggestion a procedure was developed in Appendix A.44 that "measured" both the number of images present in a section of text and weighed them according to importance. It was assumed that images that occur more frequently in the novel are generally more important than images that occur less frequently. This assumption is true only on a statistical basis, not absolutely for all occurrences of all images. The application of this model, shown in chapter 2. indicates that the following scenes are the richest in imagery: the initial section ending with the frightening "pull out his eyes/apologise" refrain, Stephen's illness at Clongowes resulting from his fall into the ditch, the pandybat episode, the scene with the prostitute at the end of Chapter II, the sermons on death and hell and Stephen's reveries concerning Emma between them, his dream and subsequent confession, the experience of seeing the girl on the beach, and in the final chapter, the scenes concerning the "whining ivy," the composition of the villanelle, and the scene in which Stephen looks up at the circling birds before the symbolic dismissal of Cranly from his life. Clearly, these scenes are those which are most significant in Stephen's development.

Among them, some experiences are more important than

others. The pandybat episode, the scene with the prostitute, the confession, the scene on the beach, and Stephen's final walk with Cranly mark experiences where the most fundamental changes in his life occur. Each comes about as the result of a sustained build-up of both inner and outer forces, and each contributes to defining the habitual action in the succeeding chapter or section out of which the next sustained build-up emerges. In the introduction, I suggested that the image of sensory data and the Image of epiphanic experience marked the two extremes of a continuum; the differences in the degree of intensity among these five experiences (the reader will recall the qualified nature of the experience with the prostitute discussed in chapter 4) and the differences in intensity between this group and the other epiphanic experiences confirm that suggestion.

That these experiences are accompanied not just by dramatic "peaks" of image intensity but that they are coincident with a sustained build-up is apparent in the graphs for individual chapters. This pattern is especially apparent, for example, in the pandybat episode (2.3), the scene with the prostitute (2.4), the confessional scene (2.5), and the scene on the beach (2.6). Consequently, the first half of the original thesis—that epiphanic moments are coincident with increased awareness of the self in relation to the environment, indicated by large concentrations of important images—is substantiated.

The second part of the thesis is that the developments of Stephen's mind could be traced by noting the changing patterns of associations among images. It was assumed that "association" meant textual proximity: if two images are used close together a number of times in some portion of the novel, there exists some associative link between them within Stephen's mind. A number of independent computer

procedures were used to trace these associative patterns. The frequency of occurrence of images was broken down by chapter and the list then sorted on that frequency. This material indicated new areas in Stephen's experience, increased and decreased prominence of various images, and other broad patterns of image associations and use. For example, these lists show vividly the relative importance of fire images in Chapter III and water images in the succeeding chapter. This does not imply that the careful reader would not notice these relative frequencies, but an interpretive point that makes use of this fact is strengthened if one can specify these frequencies exactly. Second, an image concordance was produced that listed each occurrence of each image with the five images surrounding it. This document facilitated checking the changing context or environment of an image over the course of the novel. Also useful in developing patterns of association was the factor anlysis program described in Appendix A.42. This program revealed clusters of images that frequently occur in the same context. It was run independently on each of the five chapters of Portrait so that the changing patterns of associations among these images could be analyzed. The factors or clusters that I found helpful are listed in Appendix D. Finally, a number of thematic groups of images were defined and their distributions over the novel computed. To reveal the inherent patterns of repetition within the raw distributions, the data for each of them were submitted to Fourier transformation. The resulting graphs and power spectra reveal the characteristic pattern for each theme (see Appendix E). Using these computer-produced aids, I was able to define the fundamental structure of associations among images and note the changes that take place during epiphanic experiences. Since the major body of this study is devoted to

this analysis, a full summary here is impractical; the discussion that follows attempts to characterize the most important patterns found.

No attempt was made to explain why an association might have been formed between two images; it was assumed that these links build up from proximity within Stephen's experience. Essentially, such links are similar to semantic relations where there is no inherent reason for associating sign and meaning: they exist de facto or by tradition. These strong links often have a value dimension. In some instances groups of associated images exist in pairs connoting dialectical opposites: for example: hot/cold, fire/water, black/white, red/green, hither-thither/circular form, and so on. As Stephen's experiences grew, many of these contraries became resolved or fused into a complex unity embodying both extremes of associations. Such literal welding was seen in the images of scalding tears (uniting fire and water) and seabird (uniting bird and sea), to name two. The result of such fusions was a greater maturity of perception, a greater comprehensiveness of viewpoint, such that by the end of the novel Stephen's mind is a complex but integrated fabric of associative patterns.

In Chapter I, a number of themes emerge; among the most important are groups of images denoting eyes, birds, fear, water/cold, fire/hot, and names. These, in concert with slightly less important themes, develop into a clearly defined structure that forms the basis for the pandybat epiphany. From the beginning, eye images suggesting Stephen's sense of vulnerability were linked with bird images, connoting physical threat and fear. Water and coldness, too, functioned dialectically opposite another group, fire and heat images. The former were strongly associated with Stephen's fall into the ditch and, by implication, with a number of other un-

pleasant images including the bloated rat, death, excrement. and guilt. In contrast, fire imagery emblematically suggested the warmth and security of home, all that was opposite Clongowes. Permeating these relations was the theme of identity closely related to Stephen's name. Prior to the pandybat episode, a number of extensions among these groups were established. The pandybat was related both to bird imagery through the turkey and to a different water image. the sound of water dripping into a brimming bowl. The ditch became strongly associated with guilt through the smugging incident. Identity, in Stephen's mind, was closely linked to face and eye images. Consequently, when the prefect of studies unjustly punishes Stephen-reading in his face the character of an idle, lazy schemer-most of the important thematic patterns fuse into a new, more camplex structure in the searing pain of the bat that brings scalding tears to Stephen's eyes. Associations are no longer unidimensional; positive and negative facets join to produce in Stephen a distinctly more mature personality structure.

Chapter II, while relatively sparse in imagery, does expand and develop several themes. Dominant among these is the "metatheme" involving the dichotomy between the physical and the ideal, the objective and the subjective. Related to the unattainable ideal are the repeated references to blue, connoting that which is distant; the stylized running form Mike Flynn attempts to impose over Stephen's natural gait; and the variety of images from The Count of Monte Cristo that Stephen constructs to spur his escapes into fantasy. Images concerned with the most fundamental aspects of physical existence—food, physical love, and procreation—invariably appear in a pejorative context; all are linked in one way or another with the motif involving filth, excrement, and death first established with reference to the ditch. Food

Stephen associates with scum and slime, laughter and ridicule; the scene involving Stephen's first encounter with sexual intercourse is encompassed by slimy streets; the image foetus Stephen associated with death, not life. Most of the actions portrayed in this chapter involve Stephen's attempts to maintain the distance between these two extremes, to keep his concept of the ideal from crashing on the plane of objective experience where he is forced to contend. Often the results of his attempts are ironic in the extreme; for example, to defend his idealized image of Byron, Stephen repeats the Confiteor to distance himself from Heron's blows and demands to submit. Later, Stephen finally submits, but it is a submission to his own physical desires and the pull of the prostitute's arms. Thus, the thematic pattern concerning submission is reversed in Chapters I and II. In I. Stephen submitted to physical punishment but refused to submit to the implied guilt associated with it (in II, we see that triumph undercut by the derisive laughter of Father Dolan and Simon Dedalus); in II, while Stephen manages to withstand Heron's demands to submit, his submission to his own physical desires is complete on the psychological level but not the physical. He consciously seeks out the prostitute but is unable to actively embrace her; consequently, his selfimage at this point is one of degeneracy and sinfulness, a self-image nearly opposite that at the end of the preceding chapter and that established in Chapter III.

In Chapter III, several major shifts in associations first suggested in earlier epiphanies become apparent. Eye images in Chapter I were strongly related to bird images, with an implied link of fear; fire images, primarily associated with the hearth fire of home, were highly positive in connotation. In III, eyes become closely associated with light, emblematic of God's grace and awareness. On the other hand,

fire assumes the cultural association with *Hell* in the fundamentalist sermons of the retreat. The physical fear induced by these sermons leads to the literal catharsis that precedes Stephen's idealized confession. At the end, he is left exhausted but with a sense of sanctity.

The pair of themes, bird and water, opposite eyes and fire in Chapter I undergo a similar reversal in Chapter IV. The predominant form of water image, the sea, while physical and immediate, connotes the abstract concept of mind inherent in the aesthetic theory of Chapter V. Reflecting off the surface of the sea are cloud images, suggesting the distant, the idealized. Spanning the distance between clouds and sea in Stephen's imagination is the birdlike image of his namesake, Daedalus/Icarus. As the scene builds toward epiphany, Stephen grows increasingly aware of both the details of his physical surroundings and the mythic/abstract form of his perceptual experience. At the height of the experience the major thematic components fuse in the word seabird, indicating the function and power of language for epiphanic perception. Through language and literature Stephen will attempt to realize his identity as artist/creator. suggested by his name, and seek to reconcile the ideal with the physical.

The formal statement of this experiential insight occurs in Chapter V in the aesthetic theory. Through the perceptual process of the Image or epiphany, the artist derives the materials for his art; in turn, the Image or epiphany, when transcribed into art, joins him with his audience. Following the statement of the theory, we see Stephen's mind actively involved in the perceptual process just described. As he awakes, images rise and flow through his consciousness before precipitating into verse; within the creative act, experience and language fuse. The close dependencies among

perception, language, and art realized abstractly by Stephen in the aesthetic theory, are realized experientially in the villanelle scene. The concluding scenes of *Portrait* reveal the consequences of that realization: Stephen's psychological preparation to assume the role of artist and shaper of his cultural environment. Ironically, Stephen feels that he must distance himself as much as possible, mentally and physically, from Ireland to accomplish his calling.

From earlier discussions and from this summary we can see that the associative relations among images grow and develop as Stephen grows and matures. Indeed, the associative structure of the components of experience—the imagery of the novel-defines the personality structure of Stephen just as the pattern of molecules in a crystal define that substance's crystalline structure. We have seen that Stephen's personality tends to be relatively stable within individual sections of the novel, but as the forces around him and his responses to them grow, the level of emotional intensity also grows until, characteristically, the experience culminates in epiphany. At that moment the major thematic developments of the section converge; after that time, the changes in Stephen's personality are reflected in the changes that have taken place in the associative relations among imagery. To a great extent, the changes in personality are the changes in associations and connotations among experiences. Thus, the second part of the original thesis, that the development of Stephen's mind can be traced by tracing the changing patterns of associations that take place at epiphanic moments, is confirmed.

To show that the major developments of the novel are reflected in, if not dependent on, the structural organization

of individual words in the linear sequence of the text, I was forced to regard each and every occurrence of an image as "meaningful" and "intentional"; at times, the proximity of certain images may imply on some level of higher meaning or intent an opposite or ironic connotation. For example, in Section 4.1 Stephen's religious epiphany is manifest in concentrations of images with highly idealistic associations (flowers, whiteness, incense, etc.); in the very middle of this cluster occurs the image of a giant cash register in the sky on which Stephen imagines his pious deeds are recorded. An image so grotesque in the middle of numerous images associated with Stephen's idealized confession completely destroys any "serious" belief on the reader's part that Stephen's present state of grace can be sustained. The effect on the reader is an ironic distancing from the fictive world of the novel: he sees that Stephen's self-concept at this point is as unreal and grotesque as the image pattern in the text. While this irony is carried in the imagery and while the computer through its retrieval capabilities can facilitate perceptions such as this, the realization must come from the individual reader's interpretation of the text and the research aids provided by the computer. At present we have no model or formal definition of irony that the computer can use to locate other instances similar to the scene in Chapter IV. This may eventually be possible by assigning semantic tags to words and then looking for passages dominated by words within one particular range of a value spectrum but containing words from another, distant point on that spectrum; the practicality and usefulness of such an approach has yet to be demonstrated.

The materials employed in this analysis may be useful, however, in dealing with irony on a larger scale. Repeated readings of certain scenes in *Portrait* often produce in me

very different responses. When Stephen is waxing particularly rhapsodic—for example, in the villanelle scene—I, at times, will "go along" with him; I will accept the level of intensity of his epiphanic experience as real or valid within his fictive universe. At other times, I want to say to him. "Get off it! How can you possibly take yourself so seriously"? This latter reaction represents, in effect, an ironic distancing of my own responses and empathic projections from what is presented as real or factual within the fictive world of the novel. This irony, however, is quite different from the earlier irony produced by the cash register image; here the irony is pervasive, distancing me from the scene's entire portraiture of Stephen. Because my response is not consistent, whatever is distancing me from Stephen must be a function of my own moods as well as of Joyce's narrative. The basis for this particular kind of irony can be found in the aesthetic theory, and the computer can, I believe, help locate such instances.

In the discussion of aesthetic theory, Stephen states that the Image constitutes the material the artist portrays, but it also is the element that joins the mind and senses of the artist with the mind and senses of his reader. If taken literally, the relation described can be represented by the following diagram:

critical level	Reader's mind
intentional level	Joyce's mind
fictive level	Stephen's mind

While we cannot know Joyce's intentions, we must "go through" that level if we are to project our responses into Stephen's universe. The significance of this relation is most important in the matter of ironic distance.

To digress for a moment, the primary difference between tragedy and melodrama is the viewer's different empathic involvement in the play's fictive world. The level of emotional intensity in tragedy usually rises slowly, carrying with it the viewer's empathic involvement; at the climax he is as transported as the character and he experiences an emotional release or purging similar to that of the tragic character. When the viewer's range of emotional responses is great. the effect is tragic catharsis. Melodrama lacks the slow, sustained build-up of emotional involvement that characterizes tragedy. Often the perils and falls of the melodramatic character are as bad as or worse than those of the tragic character, but the viewer is not on the same emotional level as the character; he has been left behind. Usually, the action proceeds from a relaxed normality to grave predicament so quickly that the viewer is unable or unwilling to follow empathically. Consequently, when the level of intensity is relaxed, the melodramatic character may claim catharsis or great relief, but the viewer is more likely to experience the comic relief that characterizes short, abrupt releases of emotional tension.

An analogous relation exists between epiphany and irony. The epiphanic scenes in *Portrait* are indicated by dramatic peaks in the concentrations of important images. Within the fictive world, there is no question of the intensity of Stephen's experience: the graphs of chapter 2 of this discussion make this apparent. If, however, we assume that the narrative should evoke in the reader an experience that at least approximates the experience depicted in the fictive world, the matter is not so simple. For example, the graphs indicate that Stephen's experience in creating the villanelle is epiphanic; mine is not. On the other hand, in experiences such as the pandybat episode and the epiphany on the

beach, I am carried along by the narrative. As Stephen's involvement in his environment grows more intense, my involvement with the novel grows more intense. When he experiences the sudden clarification of thematic relations, I experience a sudden clarification where I see the major themes of the chapter converge, fuse, and redefine the relations among themselves. What, then, characterizes the difference in my responses to these portions of the narrative and to the villanelle scene?

The answer is embarrassingly simple. I have been "carried" through a build-up of emotional intensity in some instances and not in others. A close look at the graphs of Chapters I, IV, and V of Portrait indicates that the major epiphanies of I and IV are accompanied by a sustained build-up of image density and, hence, emotional intensity. These scenes move slowly, progressively toward climax. The villanelle, however, begins in medias res with the emotional intensity already very high when the scene opens. Stephen is highly aroused; I am not. This mode of presentation does not compromise the importance of the experience for Stephen, but it does compromise my reaction to his experience. Instead of sharing something of Stephen's epiphany, I experience an ironic distancing from him. When the reader is carried empathically through a wide range of emotional intensity with the fictive character, he is likely to share that character's epiphanic experiences just as the viewer, if carried slowly and deliberately through the progressions in emotional intensity of a tragedy, will share the tragic hero's catharsis. If the level of intensity jumps too abruptly in the fictive world, leaving the reader behind, he is likely to view the character as ironic, just as the viewer, if left behind, is likely to experience comedy under similar conditions in melodrama.

Translated into functional terms, this realization leads us to expect that scenes corresponding to peaks that top a sloping base are likely to produce strong responses in the reader; scenes whose peaks are very abrupt with little or no sloping base are likely candidates for extended irony. Consequently, the computer may be useful to the literary scholar in examining scenes he suspects are intended to be ironic as well as discovering leads to other scenes he may not have noticed that may also, upon close reading, be ironic.

The final question that remains is whether lovce intended to portray scenes such as the villanelle section as ironic. We can't, of course, ever know what Joyce intended, but over the past few years, subjecting his work to the closest scrutiny I could give it, I have emerged with an overwhelming respect for his precision and craftsmanship. It is inconceivable to me that Joyce was not in control of every single feature of his work, that he did anything without some purpose. When I consider the effect of the irony of the villanelle on me, I am led to a different perspective on the novel. If the composition of a thoroughly mediocre poem accompanied by so much emotional energy is ironic, would not the grandiose aesthetic ideas of the character who wrote that poem also be ironic? The plot thickens and the irony grows deeper when we realize that although Stephen's statement of his theory may be highly ironic, the ideas expressed do describe the novel containing them; this assertion has been the basis for the entire study. The result is a realization of how completely Joyce controls our responses to his work. When he wants us to empathize with Stephen he takes us along; when he wants to jar us out of involvement with the plot and the fictive world, he leaves us behind. He constantly modulates our emotional responses through imagery; the basic pattern of this aesthetic orchestration corresponds with the rhythmic patterns that can be seen in the graphs of chapter 2. All writers do this to a degree; few do it as skillfully as Joyce.

In this study I have sought to demonstrate that the computer can be used to explore a work of literature by helping to evaluate a critical thesis derived much as any other critical thesis. In addition to demonstrating this thesis, I have also attempted to point out structural patterns that I feel augment the aesthetic aspects of the novel. Finally, I have attempted to show that the computer can potentially help in our consideration of the larger, conceptual aspects of literature, such as irony. If nothing else, I hope that this study indicates that the beast can be tamed, that the computer can aid us in the endeavor that our profession considers most important—the humanistic interpretation of literature.