

HOLLOW VOICE

This issue marks the end of a full year's worth of *XYZZYnews* and is also the largest one to date, with 32 pages in the print version. My New Year's resolutions for improving the 'zine include even larger issues, more timely mailing, and (perhaps) some full-color print pages. We'll see. On other fronts, the *XYZZYnews* Web site is getting beefed up—and just in time too, because at my day job I'm switching hats to become managing editor of a techie-oriented magazine (same company, different publication) about the Web, called *Web Developer*. Some of the ideas I'm toying with for additional content for the *XYZZYnews* Web site include having audio or video clips of interviewees, opening screens for "Sneak Preview" games, and options for online gaming. Suggestions for additional online content are most definitely welcome.

But I mention my job mainly to correct the mistaken impression that one Web site devoted to reviews of other sites has about *XYZZYnews*. The McKinley Internet Directory (<http://www.mckinley.com/>) describes *XYZZYnews* as a magazine "about computer and video games, as the publisher/main writer does this for a living." (Where'd they get the bit about video games, BTW?) Well, it would be great to write about, tinker with, and review IF games all day, wouldn't it? In the meantime, though, this will remain my after-hours labor of love, and I'd like to just give you the briefest of introductions to what you'll find in this latest issue: there are several thought-provoking essays, including Graham Nelson's ruminations on Jigsaw and how readers identify (or fail to) with a game's central character, Doug Atkinson's long-awaited second part of his "Character Gender in Interactive Fiction" article, and Gareth Rees's views on approaching game design and analysis. I hope you find it all as compelling as I do.

Until next issue, happy gaming!

Eileen Mullin
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Editorial deadline for Issue #7 is December 31, 1995.

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Sneak Previews

Stuck Mid-Game: A Weekend of Prolonged Frustration by Marnie Parker (103005.1513@compuserve.com) is an Inform game-in-progress that she bills as "an interactive science fiction mystery novelette." The year is 2049, and you've set aside a whole weekend to play a classic IF game. You must first contact an online friend to get a hint for playing the game, but your conversation is abruptly interrupted. When you reestablish contact, you discover that your friend has suddenly disappeared. Although you've had a long online relationship with your friend, you must now delve into his real life to discover who had a motive to either kidnap him or kill him. And your personal agenda for tracking him down, of course, also includes being able to get the hint you need to finish the classic IF game you're playing! Gameplay is set over the course of a single weekend, with a small number of rooms and reportedly difficult puzzles. "Stuck Mid-Game" will be freeware and has an anticipated release date of early 1996.

November/December Top 10 Picks for IF on the World Wide Web

.alt.fan.douglas-adams FAQ

<http://www.lib.ox.ac.uk/internet/news/faq/archive/douglas-adamsfaq.html>

GINAS Home Page

<http://www.cs.indiana.edu/hyplan/jestandi/ginas.html>

I Have No Words and I Must Design

<http://www.crossover.com/~costik/nowords.html>

INRETE Games Page

http://www.inrete.it/games/gms_e.html

John Chang's Home Page (*click on the opening graphic*)

<http://www.contrib.andrew.cmu.edu/~jrc/>

LIMA web page:

<http://lima.imaginary.com/>

Play Colossal Cave!

<http://sundae.triumf.ca/pub2/cave/node001.html> (0k)

Snacky Pete's Text Adventure Archive

<http://www.helikon.com/Personal/Pete/Advents/iflib.htm>

Totally Unofficial List of Internet MUDs

<http://tecfa.unige.ch/pub/documentation/MUD/Big-Mud-list.html>

The XYZZY Page

<http://www.winternet.com/~radams/adventure/xyzy.html>

Dear Eileen,

I was intending to write this little note after part 2 of Doug Atkinson's article on character gender in interactive fiction appeared, but the recent discussion about gender in r.g.i-f (about the gender of characters in Graham Nelson's Jigsaw) spurred me on. As a gay man, I think I may have a slightly different perspective on gender in interactive fiction.

I am occasionally annoyed with games that come with a heterosexual assumption; you choose your gender at the start of the game, but then the game requires intimate relations with members of the other sex. For example, in *Leather Goddesses of Phobos*, you choose your gender in the opening scene by using either the Ladies' or the Gents' room. From then on, a variety of sexual encounters occur with members of the other sex. When I played the game, I finally had to grit my teeth and choose the Ladies' Room (and then play as a male character) just to get the genders of the NPCs correct.

But in my opinion, games that ask you to choose a gender are usually asking the wrong question. Often what is more important is the gender that the player is attracted to. I think i-f game programmers can easily come up with ways of determining this. My solution to the LGOP problem would be this: You are in Joe's bar, and there are attractive members of both sexes there; to continue the game you must make some sort of advance toward the one of your choice (buy one of them a drink or make some other affectionate move); this would determine

the genders of the other NPCs without the game even needing to know your own.

(Similarly, games that require seducing a NPC in order to solve a puzzle could get around the problem of determining the player's gender by allowing for two equally acceptable "solutions" to the puzzle— one of each gender.)

—David Wagner
wagner@vsopb7.cern.ch

To XZZZYnews:

I enjoyed Graeme's trivia quiz (though it was rather tough), but I did find a couple of errors in the answers:

#72: "Grueslayer" is actually found in *Beyond Zork*, not *Zork Zero*.

#95: Trinity also has a scene set in Japan.

I also have another addition to the bug list; I got this from *New Zork Times*, actually. When you put objects in the raft and then deflate it, they effectively cease to exist, allowing you to carry as much weight and as many objects as the raft will hold (it won't hold the gold coffin, unfortunately, and of course sharp objects are out). This is because the game handles the pile and the raft as two separate objects, and there's no provision for handling the objects in the raft when the switch is made.

— Doug Atkinson
datkinson@lisp.purdy.wayne.edu

Eileen,

Yet another person has rediscovered IF through XZZZYnews. I'm currently

bashing my head against Christminster and slowly getting back into things. Yes, as the review states, it's good! But I really don't have the time for these games...

Anyhow, the survey published in the last issue of XZZZYnews was intriguing. I am left wondering about other aspects of XZZZYnews readers.

1. The top two occupations of the readers were either students or technical-based. Of the students, what majors are they pursuing?

2. An interest in text-based adventure games (interactive fiction) would also suggest an interest in reading. Is this the case?

3. If so, what types of books do people prefer? science fiction, cyberpunk, mystery, fantasy, romance, westerns, nonfiction?

4. What are their favorite books and authors?

5. How many of the readers have written an IF?

6. How many are writing or thinking about writing an IF?

7. Do the readers like other forms of puzzles? puzzle books, Rubik's cube, mathematics...?

8. What number of IF games has the average reader finished?

Hopefully, conducting such a survey is not so overwhelming that you wouldn't consider doing it again soon.

—David W Palmer
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David—

Your questions sound great — I know I'd like to know these answers on a large scale too. For a second survey, I'd like to ask all those reading this to

dash off their answers to these eight questions listed here, in as much detail as desired, and mail the info here to me at eileen@interport.net. I'll put answers in issue # 7.

—Eileen

To XZZZYnews:

I've just come across the first four issues of XZZZYnews (thanks to a search in the Open Text index, which located only the first issue). Congratulations on a wonderful product.

I do admit some pain at the criticism of the Adventure Game Toolkit (AGT) parser. Remember, after all, that the core parser was written in 1985, and that the "meta-language" extensions that Dave Malmberg added were quite powerful if properly used. The "guess-the-verb" games are really the game-writer's fault, not the fault of the parser itself (which, after all, is only the core of a game). My experience in 1985

(when the Generic Adventure Game System was released) and in 1987 (when the Adventure Game Toolkit was released) was that the parser in AGT was superior to any other adventure-game-writing system available. Heck, we even got a very favorable review in *PC Magazine* in December 1988. Of course, I do hope that others have built better parsers and other tools that make gamewriting more enjoyable and less like computer programming.

I'll also make a confession: I am not much of an adventure game player, and it may well be that I have never actually solved an adventure game.

What I always enjoyed was the high quality writing and humor in certain games — particularly some of the Infocom games but also a number of shareware games out there. In judging the annual contests, I generally had to rely on the author's walk-through — and it's safe to say that a lot of very

frustrating games (including CosmoServe) are a *lot* more entertaining and enjoyable if you can just cheat and enjoy the writing.

I am constantly amazed at the popularity of graphical "adventure games" that not only lack the literary creativity of most text adventure games, but also lack the interactivity and inspiration.

In any event, I am writing to let you and your readers know that although I have recently cancelled my CompuServe account (after 10 years), I can still be reached on the Internet, via mail to either markwelch@aol.com or markwelch@trivalley.com or through my home page at <http://users.aol.com/markwelch/index.htm> (but don't expect any AGT or adventure game stuff on the home page — I'm an estate planning attorney these days).

— Mark J. Welch
Pleasanton, California

Special to the XZZZYnews Web Site: The Upgraded, Consolidated, Infocom Bugs List

"Last version was better," says Floyd. "More bugs. Bugs make game fun."

—Floyd's response to the VERSION command
in all non-Solid Gold versions of Planetfall.

This is a re-working of C. E. Forman's Infocom bugs list. I have played through the Infocom line and tried to recreate all of the bugs mentioned in previous installments of this list, to check them out, and to discover exactly which versions the bugs appear in and which they do not. No longer need a bug hunter play all the way through a game hunting for a bug at the end only to find that it doesn't appear in his version of the game. In several cases I have rewritten the descriptions of bugs reported in previous editions of this list, to either clarify them, correct them, add new information, explain exactly how to produce the bug (when this was previously vague), or explain how the bug was fixed. If anyone has any corrections, comments, or versions of Infocom games that do not appear in this list, I would appreciate them being sent to me at 72630.304@compuserve.com, and to Eileen. This list contains all of the bugs that have been reported in XZZZYnews, as well as some extras I have discovered that may or may not have been published.

—Graeme Cree

now at <http://www.interport.net/~eileen/design/infocombugs.html>

On Jigsaw and 'I'

by Graham Nelson (nelson@vax.ox.ac.uk)



I am now a fictional character (which is ironic, considering that the characters in my new game, Jigsaw, are mostly real.) There are people on the 'Net who claim that mild-mannered Graham Nelson is only a cover identity for a shadowy group of hackers plotting revolution (or, I hope, moderate conservatism) in the world of interactive fiction. I can only say that mine isn't the sort of name anyone would invent. (My mother did do her best to make me sound like a pseudonym, as she first wanted to christen me Piers or Cadwallidah: but my father vetoed both, earning my everlasting gratitude.)

Who am "I," though? Why do you, the reader of that paragraph, imagine yourself not as Graham Nelson but as someone stuck in a broken-down lift with Graham Nelson? Possibly my purple prose is inimitable; perhaps it just all sounds very unlikely, so that you can't imagine yourself in my shoes. (I am only wearing two, incidentally, not eight or 10.) But suppose I write: "I tried to play Zork today but I got badly stuck. I'll never understand that Bank of Zork puzzle!" Now, admit it, you've spent days like this, but you still don't think of my words as applying to you unless I actually gesture out of the page at you (the way I'm doing in this sentence). "I" means different things to you and me. The people we speak of are intermediaries between us (even if those people are ourselves).

Literature is like a game of chess in which the writer and reader sit across a board of characters in quite artificial situations. As the game is the only contact between the two, they're both trying to make it seem real. If the writer is a poet, he'll be trying to make himself one of the pieces, though this never quite happens (Dante the poet is not quite the same person as Dante, the pilgrim in his poem). He puts his chair very close to the board and the reader's far away. This enables him to move the pieces in sudden maneuvers of doubtful legality and still get away with it.

The novel reverses this, as the writer sits casually back from the board (lighting a cigarette in a long holder, like Ian Fleming) and hopes that the reader will draw in closer, hunching over the pieces. The novelist dictates the moves, telling the story through someone on the board. Either it's one of the central figures, so the tale is a first-person narrative ("Reader, I married him," says Jane Eyre to anyone trapped in a lift with her). Or there is a reclusive story-teller who knows all ("Emma then felt it indispensable to bid him good-night") but whose personality only occasionally glints in her observations ("...nobody could possibly imagine unquiet slumbers for the sleepers in that quiet earth"). By choosing who will speak, the novelist draws in or holds back the reader.

I like to think of the playwright as hiding under the table, moving the pieces about with magnets. To the reader, the chair opposite is empty. There is only play, so the reader doesn't feel self-conscious in imagining himself a pawn on the back rank of the board: nobody of consequence, but at least a witness, someone who was there.

An adventure game is far more radical. The reader — that is, the player — is not pawn but Queen, and suddenly finds himself having to actively play. (Though, just as Dante the poet must be distinguished from Dante the pilgrim, so in the rest of this article I distinguish “player” from “central character”.) It is a text fulfilling Roland Barthes's dream: divorced from its author, such that it is the act of reading which is creative, different for every reader. Reading can also be exhausting work and not everyone likes being partly responsible for the plot. No wonder the archives are full of “walkthrough” solutions.



The adventure game uses a unique form of discourse. “You open the cedarwood box.” Nobody talks like that. The text doesn't ask the reader to sympathize, or suggest what the reader should think. It tells the reader what the reader actually does think. “You draw back in horror from the giant slug-worm.” Everything the game says makes another assumption about the reader's attitudes — in this case, that a giant slug-worm is horrific. If these assumptions are too often wrong, the basis of the game breaks down. It can be damaging even to tell a joke which the reader doesn't think is very funny. (Novelists almost always put a joke into the mouth of one of the characters, so that if it bombs the reader will blame the character instead. Telling outright jokes in the narrative is left to real pros like P. G. Wodehouse, Terry Pratchett, Douglas Adams: no wonder Infocom's comedies also read that way.)

When I write about theory, I am reminded of David Mamet's remark, in his book of lectures on film direction, that — having directed exactly two films — he was that most dangerous man: a jet pilot with 200 hours flying experience. I have designed exactly two games and shouldn't make reckless generalizations. But I do want to take up a central question, to which my two games give opposing answers:

If the reader becomes the hero, how can the plot survive a massive injection of free will into its central character?

Of course it must be a sort of three-card trick. The game says: pick any card, any card you like. Somehow, you always end up picking the one it wants. But how is this trick done?

In genre games, like gothic-novel or romance (for instance, *Christminster* or *Plundered Hearts*), the game subtly but constantly tells the player how to behave. As Hardy put it, character is fate. A well-brought up young woman simply wouldn't kill innocent people. Or slurp her soup, or smash an antique vase (without good reason). Many players feel it's more “realistic” to have the central character sharply defined in advance, even though it forces them to adopt somebody else's personality. (But then this is easier for them, since they do not have to create themselves in their own imagination.) I agree up to a point (everybody loves a masked ball), but there is a radical alternative. I see this as parallel to the novel's choice between first-person narrative and third-person story.

Jigsaw tries to make the player ask not “Whatever would I do in her position?” but “Whatever am I going to do now?”. It’s essential to the spirit of the game for the player to project his or her own personality onto the central character: because the theme of Jigsaw is not a private saga. It is the history of the twentieth century, something universal, the place where all of us have lived all our lives.

Of course the central character isn’t totally vague. We eventually discover that he or she speaks little German and ate cooked lunches at primary school — but these are too trifling to bear on personality. (Someone in the end game remarks that the player is an obsessive puzzle-solver: but after all, any player who gets that far must be.)

If Jigsaw can’t say things like “What, and kill the cuddly poodle?”, how will it keep the plot on course? Its aim is to trap the Everyman-like central character in a vice, between a dangerous rush of events on the one hand and obligations to people on the other. (This is classic thriller territory — take Hitchcock’s masterpiece “North By Northwest,” for instance, with Cary Grant as Everyman.) The Prologue begins with a glimpse of Black, an alluring stranger in black: the central character wears white, and the game will become a dance of these two opposite figures. Innocently following Black leads the player into a claustrophobic, disquieting scene. The player isn’t allowed the luxury of being a bystander, but must act. After that commitment the game opens out, but guilt, fear, duty and romantic fascination continue to push the central character around.

So the first and most crucial step is to fall for an attractive stranger at a party (or, at least, to desire one). I doubt if many players will find this hard to imagine. But as most will care very much whether this stranger is a man or a woman, Black’s gender is something else the player will have to project onto the story. The written text is ambiguous*. (Rather as in Sarah Caudwell’s decorous legal murder mysteries, in which the gender of the sleuth, Hilary Tamar, is perfectly concealed. It is annoyingly hard to write a love story without pronouns, but a piece of cake compared to, say, writing an entire novel without the letter E.)

Judging from my electronic postbag, not everybody thinks the genders are ambiguous. One woman was struck by the central character’s ability to wear masculine clothes, something I had overlooked (and have accordingly reworded for Release 2). Others have said that Black “acts male”, whatever that means, and a few men have resented this (“am I supposed to be gay?”): many feel that the code name Black itself sounds male. (Blackie, presumably, would have been a different matter.) In fact I habitually imagined Black as female, that being my personal preference, but I don’t equate this with being flirtatious and passive. Nor do I think safety the only attraction. In March 1812, when she first met Byron, Lady Caroline Lamb summed him up in her diary as “Mad, bad and dangerous to know.” But she fell for him on an awesome scale.

* Cf. Doug Atkinson, “Character Gender and Interactive Fiction” in XYZZYnews #3 for interesting comment on ambiguity of central-character gender. (What he says about Curses is exactly right.)

And this is also the answer to those who, quite reasonably, point out that the simplest thing all round would be to shoot Black at the earliest opportunity. (Indeed, the end game reflects on this at one point.) Could you really shoot someone you're attracted to? You the reader, that is.



But most of my mail has been aggravatingly helpful: a classic post-Release-1 deluge of bug reports. In a few cases, people have been taken in by the truth (for instance, several said "surely the band didn't keep playing when the Titanic was sinking": but they did, they did). Still, there were bugs aplenty. I've fixed 194 to date, about 90% largely cosmetic (such as spelling mistakes) or possibilities I had unaccountably failed to provide (such as "taste lightning conductor"). My favorite bug was the parser referring to Miss Shutes, a fabulously beautiful heiress, as "him". The biggest wince came when I found

```
if (player has mandolin)
in my own source code, instead of
if (mandolin in player)
— an excruciatingly elementary Inform mistake. It must have been very late at night.
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That still wasn't the stupidest thing I did, which was to misquote my own email address. Would you buy a used program from this man?

All this despite months of play-testing, by the old Curses team of Michael Kinyon, Gareth Rees and Richard Tucker, whose reports put together occupied about two inches' worth of printout on my desk. (Most of the bugs I mentioned came from my final redraft, after their efforts.) I numbered the pages and would miserably wade through ten or so at a sitting. My thanks to them for their dedication and constant cheerfulness in the face of sulky apathy.



It's uneasy for any game's designer to look over a player's shoulder and see the map being drawn. (You bite your lip, trying not to say "No, the Jade Room is really east of the T-Junction, I know it looks as if it's southeast, but...") So here is my map of the major landmarks. Jigsaw is a romance on three levels, making repeated use of pairs of linked opposites:

Time	-- The Hinge --	Nature
The time zones		The Land
Jigsaw puzzle sub-game		Sketch book sub-game
Events and inventions		Life: animals and people
The chain of events		Random acts of compassion
White	-- Love story --	Black
The player is well known		The stranger is unknown
What really happened	-- Reading history --	What should have happened
Acceptance		Judgment

Like any winter's tale, it's a parable. History is the case-law of morality, and I believe that reading history is a tenuous bridge between the callous inevitability of what has happened, for good or bad, and the woolly compassion of the reader. To fantasize about the past, to want to change it by make-believe, is to lose our moral grip. But to look back with dispassion is to evade responsibility. One must accept that one is personally implicated and still make judgement on it all, its triumphs and crimes.

As for the plot, Jigsaw comes full circle (as a puzzle-tree diagram of the game would reflect). It begins with an act of guilt, as Black and White divide and become adversaries. While they are opposed, neither can feel quite happy (many players have the creeping sensation, as they are intended to, that however clever they're being, they are perhaps not playing for the right side?). But the game ends with an act of forgiveness as the lovers reunite. Ultimately the Hinge doesn't tear. The past is accepted for what it is, unchanged.



I began Jigsaw in the wake of finishing Curses, in the University summer vacation of 1993. Curses wasn't very popular at the time and not many people had heard of it. I'd enjoyed writing it but felt a bit ashamed at its ramshackleness (though I now think that's what makes it fun). I decided that my next game would be Serious, have a proper plot, look grown-up. All the same, my first sketches were rather derivative. The two games I most admired, Spellbreaker and Trinity, had a heady effect on the early design. The jigsaw itself, and the device of a long-concealed symmetry, are very Spellbreaker-esque (also a long, relatively narrow game with many scenes); and the weave of historical re-enactments is reminiscent of Trinity.

The jigsaw motif literally holds the game together and symbolizes, sometimes explicitly, the interconnectedness of events: it deserves to provide the title. (Though the devil on my shoulder did suggest "Time:1999.") All the same, I started the jigsaw just because it was fun to code: the rest came later. It appealed to me to half-hide the pieces so the player would be desperate for them, but nobody else would understand what they were. Many of my happier moments came when inventing their hiding places. (Perhaps I was remembering Dr. Who's search for the six segments of the "Key to Time," first broadcast in the UK when I was a child.)

I chose the events and scenes in the game before coding or researching any in detail, piecing the jigsaw together — nationalism, revolution, culture, art, technology, attitudes. Reluctantly, I left out the atomic bomb since, after all, Trinity did all that: but I did include the other great engineering project of the century, the Apollo moon landings. I felt that overmuch social history would be undramatic. But the largest element I (mostly) omitted was genocide. The Holocaust was not fair, the victims had no winning line. There are plenty of happier times, though, and it wasn't hard to fill out the map: only glum, as I looked down on a huge and unfulfilled design.

I began to drop into Oxford County Library with pockets full of coins to photocopy documents — maps, photographs in biographies, accounts of what happened on particular days. The County was always more convenient than the Bodleian (the magnificent University library), except when on the track of utter obscurity. For each scene, I tried to read everything on open shelves, usually four or five books and some encyclopedia entries, and whatever background caught my eye.

The 1956 run of the “Eagle” comic, which I read in facsimile, was an especial delight. So was the Apollo 17 Lunar Surface Journal. A few documentary videos were useful: for instance, Stephen Poliakoff’s excellent film “Century” filled in a room description from 1900.

Enthusiasts were better value than professionals: real historians don’t tell you the color of Albert Einstein’s socks. But sometimes the bigger the “fact”, the more the doubt (try asking biographers of Chain, Florey and Fleming who really discovered penicillin); and even the most famous event can be mysterious. I looked up some 20 books on Lenin, from Communist propaganda to Western tombstone biographies, trying to picture the famous train journey. But I ended up with only two pages of notes and used nearly every detail in the final game. Elsewhere I threw away enormous amounts. (Half a million people worked on Apollo and wrote down everything they did.) I still have a ring-binder full of it: sketch-maps, photos, cryptic notes.

Quite early on, I realized that a 128K standard Infocom game (which was all Inform could compile at the time) would never be enough. With about four of the 18 main areas written, I’d already used up 80K. The project was shelved until Inform could compile 256K games: and then all the old code had to be converted into modern Inform syntax (I had learned painful lessons from my failure to keep the Curses source code up-to-date). During 1994 I made sporadic extensions, a piece at a time, filling in a depressingly empty progress chart. The pre-planned design constantly shackled me. The low-point of morale was about halfway, when my favorite regions were all done. I felt as if I’d eaten all the soft centers in a box of chocolates and now had to chew through the toffees.

Over Christmas and the New Year, I coded up the end-game sequence and this, unexpectedly, was the high point. I felt I could finally see my way to finishing, and announced the title for the first time (in *XYZZYnews* #1). The end game contains much of my favorite material, breaking out into sunlight after a long march through shadow, but I nearly made a hash of it. At the time I was interested in medieval allegory and was fitfully translating an Old French masterpiece, the “Roman de la Rose.” (There is a Middle English translation, supposedly by Chaucer, but it’s not very accurate or lively.) Allegory seemed the perfect way to draw out the theme of Jigsaw, with Time and Nature making personal appearances. From C. S. Lewis’s classic textbook *The Allegory of Love* I found a scene by Claudian remarkably close to what I wanted. As Claudian’s lawyers had been dead for 1500 years I felt safe in plagiarizing, sorry, adapting his poem. The play-testers politely but resoundingly threw out the resulting pastiche. I wrote the Hinge scene in its place, but I still had allegory in mind.

Once the first draft of the end-game was complete, it remained only to fill out the last few zones (in the Easter vacation of 1995), work up a scoring system, and test: a hateful job, writing the “model solution” file (1,500 commands or so) and persuading the game to accept it. And then the play-testers took over. (Curiously enough, Gareth Rees finished writing Christminster in the same week I finished Jigsaw: at one time we were each testing for the other.) Finally, on September 24th, Jigsaw was released. I went away for the weekend and climbed the crags overlooking Edinburgh. There were two white sails on the perfect blue sea. ☼

Character Gender in Interactive Fiction, Part II

by Doug Atkinson (datkinson@lisp.purdy.wayne.edu)

Caveat lector: In this article I discuss many classic Infocom games, as well as several currently available shareware games. Though I try to avoid specific spoilers, I do refer to puzzles that may spoil some surprises. Part I of this two-part article appeared in XYZZYnews #3.

I. Introduction

In part I of this article, I discussed the role of player character gender in IF. I covered the Infocom spectrum and several shareware games, the fact that most of them feature non-gendered characters, and the possible reasons for this.

In this article, I will be covering non-player characters (NPCs). Many of the reasonings in the first article don't apply to this one—a game can have only one player character (usually) but many NPCs, so the programmer can stock the game with abandon.

As before, the main focus will be on the 33-game Infocom oeuvre. In this half I won't cover shareware; since each game has only one main major character, but most have several NPCs, fair treatment would take too much space (and make this article even later than it already is!).

II. Infidelity: The Single Adventurer

I must begin by disposing of games which have no NPCs, no fleshed-out NPCs, or only androgynous NPCs. The only Infocom game with no NPCs at all is *Infidel*, the game where everyone's abandoned you, saving the implementor the trouble of coding them. Obviously NPC gender matters not a whit in a game with no NPCs.

A “fleshed-out” NPC is harder to define, because every IF character is limited by their coding and none can hope to approximate a real person. However, some NPCs are little more than scenery, or merely so mechanical a part of a puzzle that they never approach life. Compare these two hypothetical game transcripts, one based on a real game:

There is a dwarf sleeping here in the toll booth. The gate is closed.

>E

The gate is closed.

>GIVE THE BRASS COIN TO THE DWARF

The dwarf wakes up, bites your coin, and hands it back. "Fake," she mutters as he nestles back into sleep.

>GIVE THE GOLD COIN TO THE DWARF

The dwarf wakes up, bites your coin, and tosses it in a basket at his feet. "Go ahead," she mutters, pulling down the gate-opening lever and nodding off in one smooth motion.

>E

There is an automated toll gate here; it has a basket at chest level.

>E

The gate is closed.

>PUT THE BRASS COIN IN THE BASKET

The machine angrily spits the fake coin back at you amidst a flurry of red flashing lights.

>PUT THE GOLD COIN IN THE BASKET

A green light comes on, and the gate opens with a cheery "ding."

>E

Functionally, the dwarf and the machine have exactly the same role; they keep the player from passing unless they cough up the gold coin. The fact that one is alive and one is not is a matter of window-dressing, and making the dwarf male or female is merely a cosmetic detail. (This is not to say that window-dressing is not important; more on this later.)

That said, inanimate puzzles can also take on a life of their own, even if they aren't intelligent. The Vogon Hold room in *Hitchhiker's Guide to the Galaxy*, with its battery of complications to keep you from the coveted Babel Fish, seems just as malevolently self-aware as the unicorn in *Zork II* ("The unicorn bounds lightly away...The unicorn bounds lightly away..." ad nauseam).

The line between an NPC and a puzzle element is blurry, then. My working definition of an NPC has the following elements:

- A) mobility;
- B) a wide range of interaction with the player; and
- C) a wide range of purpose in the story.

A) and, to a lesser extent, C) can be sacrificed if B) is strong enough. Belboz in *Spellbreaker* and the Bird Lady in *Trinity* never move from one place, and their role in the story is mostly to exposit and give the player something useful, but they (the Bird Lady especially) make up for it on strength of personality — they feel like people, not automata. A well-defined character doesn't have to move.

This does eliminate characters who exist purely as the solution to a puzzle, such as the ostrich in *Stationfall*. Many animals in IF have this function; those in *Enchanter* hang on the edge because you can talk to them with the NITFOL spell.

Characters who exist only as obstacles will only be considered NPCs for the purpose of this article if they can interact with the player enough to feel fleshed-out, and hide the mechanics of the game behind them. Thorbast/Thorbala in *Leather Goddesses of Phobos* qualifies, because s/he talks to the player and has enough personality that his/her role (to keep the player from getting at the lad/lady in distress) isn't blared out. The bark-skinned horror in the same scene is only a game mechanic, not a real NPC; it just gives a time limit to solving the Thorbast/bala puzzle. (The Monkey Grinder in *Beyond Zork* has always felt real to me, even though he has a fairly limited script and doesn't move.)

Only four games (but a wide, wide range of possible NPCs to consider) are actually eliminated: *STARCROSS*, where the aliens (or, indeed the game) never quite overcome the feel of the basic "do-A-to-achieve-result-B-and-get-20-points" mechanics; *Sorcerer* and *Hollywood Hijinx*, where the major NPCs don't appear until the endgame and really don't do much; and *Nord and Bert*, which is surreal enough that the player barely interacts with the environment, let alone the other characters.

Finally, a few games have NPCs whose gender is really irrelevant, whether they have one or not. Floyd the robot in *Planetfall* and *Stationfall* is one of the best NPCs in IF, but he is only male by name. His personality is that of a child, but not a specifically masculine or feminine child, and his role in the story doesn't suggest a need for a gender. (His companion in the second game, Plato, is similar, although his absent-minded nerd personality is one that cliché would assign to a man.)

Under this criterion, *Planetfall* and *Stationfall* are eliminated, as is *Suspended*, where the robots the player controls are designed as masculine and feminine but not really male or female.

III. The Boy's Club and the Genre Piece

There are some Infocom games with a preponderance of male NPCs: the original Zork trilogy and *Zork Zero*, *The Lurking Horror*, *Cutthroats*, *Border Zone*, *Sherlock*, and *Arthur*.

The Zork trilogy stands apart from the others, partially because of its age; except for the thief, the well-developed and active NPCs (the demon and the Wizard) were added when the original MIT mainframe game was split apart. At the time it was written, there was no real theory of IF, and the game grew in chunks rather than being written as a whole. It's hard to judge the series by modern standards.

To answer the question at the end of part I of this article, there is only one female in the original trilogy; the princess you rescue from the dragon. Since the role of the NPCs is

mostly as puzzles, not fleshed-out characters, this is a place where gender is only window-dressing. Would it really matter to the game if the troll were female? (Again, more on window-dressing later.)

Zork Zero is only included here because there is only one major NPC, the jester, although he's ubiquitous throughout the game.

It should be noted that the rest of the games listed are genre pieces, and so something must be said about the genre piece.

A story (or game) qualifies as a genre piece if it is written to epitomize an entire field of writing, not merely to be set in it. As a result, a genre piece carries with it a certain awareness of the conventions of the genre, and they are usually closer to the front than in other writings.

Example: *Starcross* and *Planetfall* are not science fiction genre pieces, because neither one stands out as representative of a particular school of SF. At no point is the reader led to think, for example, "Floyd is here because all SF of this type has a comic robot sidekick," especially because *Planetfall* isn't primarily a comical game.

Leather Goddesses of Phobos is very much a genre piece in the space opera genre, albeit with a sex farce laid over it. Such elements as the world-conquering aliens, the kidnapped hero, the jungles of Venus, and the canals of Mars are very much in the space opera genre, and there's every sign that Meretzky was aware of that and added them intentionally.

When writing a genre piece, the writer must know and abide by the rules of the genre, or break them consciously. Character roles are an important part of this. In a standard heroic fantasy genre piece, for example, the male hero rescues the damsel-in-distress, and to reverse this is a move whose ramifications must be considered. (LGOP does reverse it in female mode, with no real effect on anything, but this is a parameter that can be changed with relative ease. Also, LGOP is such an odd game that changing conventions really doesn't have the impact it would in a more conventional game.)

Changing the rules can change the whole piece, sometimes complicating it unbearably. (Why is the detective in *Witness* male? It's a 1930s Chandleresque hard-boiled detective piece, and all the heroes of those stories were male. If you made the hero female you'd also have to explain why there was a high-ranking female in the L.A. police force in those times. Since it doesn't really matter, better to leave it alone.)

A few of the games above, *Lurking Horror*, *Border Zone*, and *Cutthroats* (to an extent) are set in male-dominated genres. The best example is *Lurking Horror*, which was inspired by the works of H.P. Lovecraft. Lovecraft's female characters are as rare as hen's teeth, and to make matters worse, the story's set at a technical school, a place that tends towards a masculine majority anyway. It's harder to justify the shortage of women in *Border Zone*, since women certainly have a place in espionage (even considering that BZ is closer to the

Le Carre end than to Ian Fleming). Cutthroats' lack of females is not especially defensible, since females can treasure-hunt as well as males.

Finally, Sherlock and Arthur are not only genre pieces, but pieces adapted from literature and set in the past. The only females in Sherlock are Mrs. Hudson, Queen Victoria, and a certain guttersnipe, and the only one I can remember in Arthur is the Lady of the Lake. Only Mrs. Hudson really interacts with the player much.

Despite the limitations imposed by the genres and pseudo-historical periods involved, the authors of these two games underused women somewhat, though the choice of storyline constrained them. One avenue for feminine characters in the source material, that of villainness (e.g. Irene Adler, Morgaine le Fey) was cut off by the decision to use Moriarty and King Lot as villains. This leaves the potential roles for women in Arthur rather thin indeed — the damsel-in-distress role is rather cliched, and the inclusion of a romance would have been out of place given Arthur's age and the author's unwillingness to change the future of the stories. As for Sherlock, the male NPCs also tend to be limited, so the omitted females aren't really missing all that much, I suppose.

IV. Mixed Games

WHAT IS TERRY'S PLAN?

G. In fact, Terry never shows up at all.

H. By the way, what gender have you assumed for Terry?

—Invisiclues hint booklet, "The Witness" (Stu Galley)

The rest of the Infocom oeuvre contains both males and females, in varying proportions. The next section contains a count of the gender ratios of the remaining games, with commentary. (Note: The NPC gender employs a subjective judgement of which characters are significant and which aren't. In some games it's easy, in some it isn't.)

Plundered Hearts: 6 male, 1 female (14% female)

Plundered Hearts is the only Infocom game with a fixed female character. This, and the fact that it's a romance and a genre piece, partially accounts for the high percentage of males. (It would have been rather gutsy for Infocom to release a lesbian romance, after all, and the 17th century pirate setting is primarily a masculine one, though there are exceptions.) It's mildly surprising to find it this low, however.

Spellbreaker: 3 male, 1 female, 1 neuter, 1 questionable (16- 33% female)

The neuter character is the green-eyed stone; the female is the roc. This game really has very few NPCs; you only really interact with Bozbar and the merchant. The questionable character is the shadow, whose gender is the same as the main character's, which is not specified in the game.

Enchanter: 3 male, 1 female, 1 neuter (20% female)

The Terror is neuter.

THE Hitchhiker's Guide to the Galaxy: 6 male, 2 female, 2 neuter (20% female)

The count of neuter characters is a little arbitrary. Strictly speaking, Eddie and Marvin are masculine but not male.

Ballyhoo: 8.5 male, 2.5 female (23% female)

Yes, there is one character (Andrew-Jenny) who counts as half male and half female.

A Mind Forever Voyaging: Outside world: 2 male, no female Simulation: 1 male, 1 female (25% female)

This was difficult to count. I decided to count only Perelman, Ryder, and your simulated son and wife as NPCs, though there are any number of very minor characters.

Suspect: 9 male, 3 female (25% female) **Witness:** 3 male, 1 female (25% female)

As with Deadline, I chose not to count Sergeant Duffy.

Leather Goddesses of Phobos: 7 male, 4 female (36% female)

Actually, six of the characters' genders vary depending on the gender of the player character. There are 4 fixed males, 1 fixed female, 3 of the same gender as the player character, and 3 of the opposite gender. The numbers work out to be the same either way.

I had to make more subjective decisions about NPC importance here than in any other game. I wound up counting the salesman, scientist, harem guard, and Sultan(ess) as significant, but not the gorillas or the Venus Flytrap.

Wishbringer: 7 male, 4 female (36% female)

Wishbringer is unique among Infocom games in having a female as the main villain. (Note that Brian Moriarty is responsible for many of the games with high proportions of females — Trinity and Beyond Zork are also his.)

Beyond Zork: 5 male, 3 female (38% female)

This counts the shop woman as one character, not three.

Seastalker: 5 male, 3 female (38% female)

Bureaucracy: 6 male, 4 female (40% female)

Note that the NPCs in Bureaucracy are basically caricatures, and conform strictly to traditional gender roles for these caricatures (male nerd, female stewardess and bank tellers, etc.). I counted all the bank tellers as one character; otherwise, the percentage would be bumped up to 53%.

Trinity: 2 male, 2 female, 1 other (40% female)

The statistics are a little misleading. The only really developed NPCs in the game are female (the Bird Woman and the Japanese woman), and I was tempted to count it as 0-2, but finally relented and put in Charon and the bubble boy. The “other” is the roadrunner, the only animal who has a significant role.

Deadline: 3 male, 3 female (50% female)

I chose not to count Sergeant Duffy, since he’s really a utility, not a person.

Moonmist: 4 male, 4 female (50% female)

The count is a little skewed here, because the number of characters in the game depends on which of the four variations you’re playing. There are only 2 females who appear in all variations.

Numbers aren’t all that matters, though. I tried to account for this in part by limiting the count to the well-developed characters only, but the way characters are used matters just as much as how many there are. The important question is not so much, “Are there a lot of women in this game?” as “Are the women in this game good characters?”

In the mixed-gender games, the female characters are generally as good (or as weak) as the males. Infocom didn’t seem to be prone to the authors who couldn’t write women, but thought they could; if there were any they stuck to writing games like *Cutthroats* and *Infidel*.

Some games are worth a closer look:

Bureaucracy and Hitchhiker’s Guide to the Galaxy: “Everyone always asked me, why is Trillian such a cipher of a character. It’s because I never really knew anything about her. And I always find women very mysterious anyway — I never know what they want. And I always get very nervous about writing one as I think I’ll do something terribly wrong. You read other male accounts of women and you think, ‘He’s got them wrong!’ and I feel very nervous about going into that area.” —Douglas Adams, quoted in *Don’t Panic* by Neil Gaiman.

Neither of Adams’ games have particularly strong women. In HHGG, Trillian is somewhat weaker than the others, partially for the reason quoted above; the game is an adaptation, and Trillian just doesn’t do much in the original. The only strong character in the game, really, is Ford. The section of the game from his point of view gives a better insight into the character than Zaphod and Trillian’s sections.

In *Bureaucracy*, there are no strong NPCs, and that’s probably a result of the genre. Humour doesn’t require its characters to be as well-rounded as some other genres. The characters in *Bureaucracy* are archetypes, and archetypes are easier to work with. (Consider the reaction of the woman at the travel agency if you try to touch her: “‘You’re invading my personal space!’ she shrieks. She is obviously from California.” The humour

of this line requires the recognition of the character as the spaced-out Valley girl archetype, and overlaying one's conceptions of the archetype on the character.)

Bureaucracy is one of the games where the females are just as weak as the males.

Leather Goddesses of Phobos: The comments about Bureaucracy apply doubly to LGOP, because LGOP is not just humor but outright farce, and depth of character would be detrimental to farce. Its handling of women can be summed up by the fact that six characters can change gender along with the player, and it matters not at all to their characterization.

Deadline and Plundered Hearts: These two games demonstrate the distinction between choosing a character's gender based on the game's cultural context (where it makes a real difference to who the character is), and choosing it as window-dressing (where it's mainly cosmetic detail).

Plundered Hearts is a romance, and Deadline includes a romance between two of the NPCs. Since these games are set in the real world, the romance element puts certain limits on the programmers, as this is an area where changing parameters leads to other important changes.

Since the romance background of Deadline only comes out later in the game, and I don't want to spoil it too much, I'll look at Plundered Hearts instead. Could Nicholas have been a woman without changing anything?

The answer is "no," of course, and this shows one of the hallmarks of a well-developed character: connections to the world.

A lesbian pirate would not have been historically inaccurate, and the game could have retained the romance aspect (if some changes were made in the main character). However, she would have been subjected to different forces in her life, and could not be treated in the same way as the male pirate. A game in which the characters are superficial, like Leather Goddesses, can change this parameter easily, but if the character is well-designed, one change will lead to other changes.

(Could the game have been written with a male main character and a female pirate? Not convincingly; see the section on Trinity and gender roles.)

There are some minor characters in Deadline whose gender really didn't matter: the housekeeper and the gardener. The housekeeper is female, the gardener male. Does it matter to the game what gender they are? Not to speak of; it's just window-dressing.

But is this totally unimportant? I would argue that it is not, that having a good gender mix (even in cases where it doesn't fundamentally matter) can help the game. If a game has no females, (if the default state for all characters the author creates is male, say) it

doesn't feel like the real world. If the writer intends to model the real world, then having the NPCs mirror the people in the real world is a significant element.

Seastalker: This is an artificial game background. "In Seastalker, you are a famous young scientist and inventor" (sounds just like *my* childhood :). Interestingly, the game's fairly equitable gender treatment seems connected, in part, to the artificiality. Realism doesn't play a role in determining character gender, and the characters are left to find their own level. (There's something to be said for this in the right setting — but authors shouldn't just throw out the real world if the game's set there.)

Trinity: Trinity contains one of the best examples of another role of character gender: using the player's assumptions of gender roles to heighten an emotional experience.

>HELP WOMAN

You begin to approach the old woman, but stop in your tracks. Her face is wrong. You look a little closer and shudder to yourself. The entire left side of her head is scarred with deep red lesions, twisting her oriental features into a hideous mask. She must have been in an accident or something. A strong gust of wind snatches the umbrella out of the old woman's hands and sweeps it into the branches of the tree. The woman circles the tree a few times, gazing helplessly upward. That umbrella obviously means a lot to her, for a wistful tear is running down her cheek. But nobody except you seems to notice her loss.

—"Trinity" (Brian Moriarty)

I believe the scene above would not hold as much pathos if the character were a man. The player (I'm speaking in generalities here) is likelier to feel sorry for the woman, because of subconscious conditioning on the importance of appearance for women, and the importance of helping old women. Whether the player consciously agrees with these ideas or not, they've been driven in at some subconscious level, and it's on that level that the scene becomes extra- tragic.

I don't think Moriarty intended to play to traditional gender roles when writing this scene; if anything, the subconscious factors may have affected his choice. Certainly there's no overriding reason in the game why she had to be a woman. There is a lesson here, though: using the player's preconceptions helps heighten the experience.

This is the flip side of the comment about archetypes under Bureaucracy, above. Letting the player fill in their own assumptions allows them to build more about a character in their minds than space allows. Taken too far, it can lead to lazy characterization and stereotyping, but to an extent it can be a useful tool.

V. Conclusions

Don't forget that all NPCs are currently objects, with only the semblance of life and constrained by their programming. The requirements of "coming to life" are different for interactive fiction than normal fiction, because the reader of a book never tests the characters' limitations. The reader/playgoer can only imagine Ophelia's answer to a question about her mother, but she won't be confronted with the answer "I don't know anything about that." All IF characters, male or female, are limited.

The presence and role of female characters can have an important impact on the game, however. An all-male game, if not in an appropriate setting, sends messages: one is that the author doesn't care much about modeling reality, but would rather stick with a male default. If females (or, indeed, any characters) aren't handled well or given much depth, the illusion is broken; and the spell of the game depends on maintaining the illusion.

Finally, showing a lack of concern for handling good females also shows lack of concern for half the potential playing audience. If more females wrote and played IF, wouldn't the field be larger, more varied, and ultimately stronger?

Addendum

After this article was completed, I obtained a copy of Graham Nelson's new game Jigsaw, which takes an interesting (and almost experimental) tack with its main NPC.

Jigsaw's main character is of unspecified gender, and is quite attracted to his/her nemesis/alter ego, the enigmatic Black...also of unspecified gender. This obviously flies in the face of my earlier comments about gender and NPC relations, as relations between Black and the player character (White) become quite close at points.

Whether this practice is successful is debatable. Some players have complained that they dislike not knowing Black's gender, and would prefer some specificity. On the other hand, it a) adds an interesting air of ambiguity to the game, and b) gives the player some freedom in picturing Black, rather than following Graham's idea of what an attractive person looks like.

The difficulty arises because players aren't used to this sort of ambiguity; Jigsaw may be the first game to use this technique for a central character. An ambiguous main character is standard; an ambiguous NPC isn't. Also, the relationship between White and Black is one intimately connected with gender (nudge, nudge). If Black were the implacable hunter pursuing you across time and space, with no thought but claiming your head, the ambiguity probably wouldn't be as glaring.

There are a few cues about player gender, which don't really prove anything but are interesting to debate:

1) White is disguised as minor officer on a cruise ship in 1912, and later as a British Army Captain in 1917, neither of which are roles open to women, suggesting White is a man.

However, when White puts on the Army uniform, the game says "It should do as long as no one looks too closely." And no one does; or, rather, the only ones who do are a five-year-old and the owner of the uniform, who's bound, gagged, and in no position to comment. Likewise, the only person who notices White in the ship doesn't notice anything but the uniform.

All this really suggests is that, if White is a woman, she can disguise herself as a man — meaning that she probably doesn't have a figure like Jayne Mansfield's.

2) Whatever gender White and Black are, they're apparently of opposite genders. At one point Black makes a reference to being mistaken for an English honeymooning couple — this is in 1956, a period when England (and the U.S., for that matter) were treating homosexuals in a particularly repressive manner (read a biography of Alan Turing for examples), and a same-sex couple would therefore hardly be taken for honeymooners.

3) Incidentally, some players have noted that, using Inform's "nouns" feature, Black is listed as male. This is not indicative of Graham's intentions so much as the fact that, in Inform, an animate character is male by default. (There are also two female characters, Miss Shutes and the Stewardess, who are listed as male, which is probably a bug or an oversight.)

Appendix

A few corrections to Part I of the article:

First, I must recommend Gareth Rees' recent game *Christminster*, which features a female player character. It had not been released at the time of part I, or I would have covered it then.

Second, I apologize for omitting two female authors of IF: Erica Sadun, author of *One Hand Clapping*, and Carol Hovick, author of *Klaustrophobia*. (I've never been able to get *Klaustrophobia* to run, but I have finished OHC, and should have remembered it.) ☒

Distinguishing Between Game Design and Analysis: One View

by Gareth Rees (Gareth.Rees@cl.cam.ac.uk)

Introduction

I wrote this essay in response to “Game Design at the Drawing Board” by Christopher Forman (*XYZZYnews* #4). When I read that essay, I felt that it didn't really correspond well with the way I work on adventure games. For me, maps, puzzle graphs, walkthroughs and scoring tables are all tools of game analysis, not game design. Design, in the creative sense, lies elsewhere.

I will attempt to outline a set of concepts which can be used to describe the design of a game and also to assist the generation of ideas. These concepts describe my own thought processes while I wrote my game *Christminster*. The design proceeded on four levels:

Level One: Plot

At the top is the game's plot. The plot is the set of elements of the game that might be used to make a story: what the background is, what happened before the game started, who the characters are, the major events that form the course of the story, and how the story will end. The plot is a map that shows how the characters interact and change as they go from the beginning of the story to the end (or ends, if the plot is branching).

Level Two: Scenes

A plot is too constraining to implement directly as an adventure game and still end up with a satisfying result. In a conventional work of fiction, the freedom of the viewpoint character is never an issue: the author can move all the characters through their various interactions and emotional states until they reach the end without much difficulty. In an interactive work, this is much more tricky to do. What is necessary is to divide the elements and events of the plot into their small-

est constituent parts, and so arrive at a set of atoms which may be reconstructed by the player into a decent plot. In Christminster, I identified a set of key scenes, each of which was an event or experience that affected the player character, and moved the story forwards towards the conclusion, and yet could plausibly be implemented as a section of an adventure game.

A scene is a single dramatic event that typically brings together several components: interaction between the player character and other characters in the game; a strong effect on the player character; and preferably a strong effect on the reader herself.

It's probably easiest to explain what I mean by giving examples from Christminster. I needed to introduce Jarboe and Bungay as characters, and I needed to make it clear that they were the villains of the game. I also wanted the reader, playing Christabel, a woman in a milieu dominated by men, to feel scared and intimidated by the two men. Out of these goals arose the scene in which Christabel is trapped in Malcolm's bedroom and forced to endure a succession of insults and threats. Another example is that I wanted to establish Wilderspin as a friend of Christabel's. I've also always liked the (admittedly rather cheap) dramatic effect of being plunged into darkness underground by the closing of a secret door. These two goals came together in the scene in the darkness of the secret passage in which Wilderspin relates a crucial piece of information as part of a story about Isis and Osiris.

These two scenes were carefully scripted: I began by writing them down on paper in the form of a game transcript; neither was changed much when I came to implement them. I went to some trouble in the secret passage scene to avoid unnecessary complications. Christabel drops all her possessions as she trips over the step on her way into the passage so that (hopefully) the reader won't be distracted by thinking "Which of my possessions do I need to use to get out of here?"

A scene doesn't have to map directly to a sequence in the game. Another effect I wanted to achieve was for the reader to experience a sense of wonder at the myriad glimpses of the history of the college, and to feel a sense of achievement at the success of her researches (Curses had these effects on me, and I wanted to return the favor if I could). There's no one sequence in the game which represents this, but instead it's a cumulative effect.

Level Three: Puzzles

The third level of design is that of puzzles. A few puzzles in a game will be integral parts of the plot, thought up at the earliest stages. But most puzzles aren't part of the plot, but are instead added on later for a variety of reasons. The most important reason for the existence of puzzles in a game is to force the

reader to experience the scenes. It would be a waste of all that careful planning if the reader could go from the start to the finish directly, without experiencing any emotional development and character interaction! One way to do this is to have puzzles that require for their solution that the player has experienced the relevant scene or scenes. Another way is to have puzzles that are an inducement to sit still while a scene is taking place. For example, in *Christminster*, the puzzle in which Christabel must escape from the secret passage is there to make the reader stay around and listen to Wilderspin (not vice versa, as the naive reader might expect!). The various puzzles that take place during the dinner scene are an inducement to stay there and listen to the conversation, without feeling that the game is too boring and linear (which it otherwise would be).

Since puzzles aren't the main point of the game, I think their exact nature doesn't really matter. However, to act as good inducements to take part in the scenes, the puzzles should arise integrally from the milieu of the game and be intriguing and challenging. In an ideal world every puzzle would have a very satisfying and elegant solution, but alas, this is very difficult to arrange.

A few puzzles are left over and are just there for the sake of having interesting puzzles to solve, or to demonstrate the cleverness of the programming, or to impede the progress of the reader so that she doesn't reach the end without savoring the middle.

Level Four: Code and Text

Having planned a scene and possibly written a transcript of how it should look, and having designed a puzzle or two to go along with it, there's a lot of programming to do. My intuition here is that the first thing to do before writing anything to do with plot or puzzles, is to set up the basic definitions of the objects involved. For each object whose existence is implied by these plans, I try to think about it as a player: what kind of interactions can I attempt with this object? It can be helpful during this process to have a list of verbs by their side and to consider each verb against each object. Only when I have the basic definition do I add the code to make it a part of the puzzle. I think it's easier to work this way round, starting with the object as part of simulated world and progressing to its role in the story, than to code the puzzle first and add the boring behavior afterwards (I find there's always a temptation to skimp on the boring behavior if I do that).

Putting the Levels Together

Typically development takes place on all four levels at the same time. A vague idea of the overall structure of a game is necessary to get started, but very little (I started work on *Christminster*'s initial puzzle when I still thought that the game

would involve the college having been taken over by elves and a mountain range in the gardens).

The author needs to be a bit farther ahead on each level than on the level below, but not necessarily very far. When I was writing the code in Christminster for First Court I had a good idea of what scenes would take place in Second Court but only a vague idea about dinner and the endgame. Sometimes an aspect of the game will prove tricky to pin down; the only thing to do is leave it and come back later (for example, I completed the gardens long before I thought of a good way to turn getting into the gardens into a puzzle).

Obviously each level affects all the others; if a scene is too difficult to be coded up (for example, if I wanted a scene in which the player persuades the abbot to take a vow of poverty by force of theological argument) then there is nothing for it but to go back and rethink the plot. If you have a great idea for a scene but simply can't think of a puzzle to motivate it, or a great idea for a puzzle but can't think of a way to connect it to the plot, then you had better put your great idea aside rather than try to squeeze the rest of the game out of shape. After all, this feature can always appear in your next game.

Tools for Analysis

The standard tools of adventure development (maps, puzzle graphs, walk-throughs and scoring) are useful tools to check that silly mistakes haven't been made. I didn't find them of any help in the creative process, though.

Maps are important for checking the realism of the landscape (making sure that rivers don't change direction or run uphill, that buildings have realistic shapes and sizes, that the topography is geologically plausible), for checking that the player character has enough freedom of action, and for checking that the map steers a balance between being too grid-like and being too maze-like.

A puzzle graph (that is, a directed acyclic graph showing which puzzles must be solved before which other puzzles) is a good way to understand the game's constraints on the order of the player's action, to check that the game is solvable, to make sure that the game steers the right balance between being too linear and being too wide, and to check that there are enough optional puzzles and alternate solutions.

Walkthroughs and transcripts are most useful in the debugging process. A walkthrough makes it easy to check that a game is solvable, and that old puzzles are broken by the coding of new ones (this is especially important if there are timing constraints or other complex interactions between puzzles). A transcript makes it possible to check exactly what effect changes have on the

course of a game. When I was debugging Christminster, I had a walkthrough which exercised all the puzzles and many of the game's interesting responses, and I kept a transcript of the game produced by capturing the output of the walkthrough. After making a batch of changes to the code, I ran the walkthrough again to produce a new transcript, and used the 'diff' program to examine the differences between the old and new transcripts. In this way, I caught many, many bugs that would otherwise have been introduced during play-testing.

Scoring is for the player's benefit, not the author's, and is best added as late as possible in the development process (otherwise you'll end up spending lots of time fiddling with points here and there to make it add up, and risk breaking the scoring system as you alter the code for objects and change the assumptions under which the scoring system worked). If you have a reasonably sophisticated hint system, it's probably useful to link the scoring with the hints, because otherwise you'll end up duplicating code since whenever the player solves a puzzle you have to both update the score and update the list of available hints.

Conclusion

This is a useful approach to the design and analysis of an adventure game. I certainly don't claim that this is the full story, or that everyone works in the same way. Each author goes about the creative process differently, and the same author may work in radically different ways on two games, or on two parts of the same game. Not everyone will want to work in this way; all I can say is that the process helped me to organize my ideas when writing Christminster.

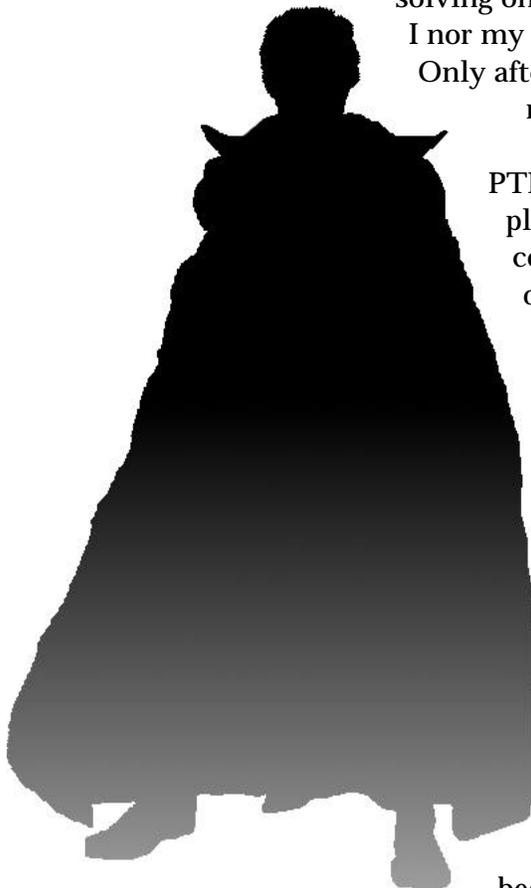
If you will permit a modicum of speculation, I think that some of the ideas in this article may be useful when writing games which don't have a pre-determined plot (in the linear or branching sense), but instead try to assemble one dynamically from "plot fragments" or using a "plot calculus." Such a game will be designed as a collection of scenes embodying particular interactions or experiences, which can be invoked according to the needs of the developing plot to produce a satisfying story. Each scene will come with a set of parameters describing the change of state which it causes (in terms of the characters' emotions, beliefs and so on, as well as the state of the world), and given a suitable collection of such scenes, the plot generator can select the scene which has the most desirable effect on the parameters of a game. ☒

The Hazards of Invisibility, or, Making Your NPCs Respond the Way They're Supposed to

by C.E. Forman

Writing "The Path to Fortune," my first serious attempt at IF, has taught me a lot about puzzle design, but one realization has stuck with me like no other, and I thought it might save some new authors a lot of trouble if I passed it along. Namely, I learned to never, ever, allow an object which alters the NPCs' reactions toward the player to find its way into the mainstream scope of an open-design game.

Here's what happened: One of the items the player acquires in PTF is a cloak, which, when worn, makes its user invisible. This is necessary (obviously) for solving one of the game's puzzles. Unfortunately, neither I nor my co-author gave it much thought at design time. Only after I'd sat down and tried to program it did I realize the possibilities involved.



PTF's design makes it a very open game. That is, players have the ability to explore about 80 percent of the game world right from the start — only a small number of locations are blocked off by puzzles. PTF has 11 major NPCs, and about a dozen minor creatures for the player to interact with. Almost all of these are accessible from the start, and there's no limit to what the player can take along when visiting them.

Starting to see what I'd gotten myself into?

The player has the ability to wear the cloak almost anywhere in the game, because there is no means of limiting its transport. No logical method of restricting the cloak's location came to mind, and re-design of the entire game was out of the question — I'd already been programming for three months when this

came up. (It's amazing what you think of when you actually sit down and attempt to code something.)

Now, since the player can wear the cloak anywhere, this means it can be put on and taken off in front of the various NPCs, and can also be worn when the player walks into the location. What this meant was that I had to go through all my NPC objects and interactions, adding evaluations that checked if the player was wearing the cloak (since, for example, you shouldn't be able to give something to a character who can't even see you).

Compounding the problem is the fact that the game by itself was already fairly complex to begin with. A particular spell can be used to put characters to sleep, the characters have their own waking and sleeping cycles, and a couple characters' behavior changes drastically during the course of the game. All this meant more checks and confirmations. The simple act of adding that cloak easily quadrupled the complexity of the NPC objects' code.

In the end, I ended up modifying most NPC actions with a check for the cloak, but left some of the less changeable alone (such as killing characters while wearing the cloak — I couldn't very well have the player be able to walk away from something like this, as it would alter the state of the game far too drastically). For some of the more magical or more alert characters, I simply decided to let the player interact with them in the usual manner (although this did occasionally require mentioning the cloak, which meant that an 'if' expression was still in order).

I'm still finding corrections that need to be made because of the cloak. No doubt beta-testing will reveal even more that I missed.

The moral of the story is this: If, when designing a game, you're considering the addition of an object that: 1) Can be used more than once in the game; 2) For whatever reason, makes the NPCs behave differently around the player; and 3) Exists in a game in which most of the locations are accessible by the player, at any given time, and while carrying the aforementioned object, do yourself a favor and think it over several times before adding it.

Redesign the puzzles or map while you still can. Don't rush the initial design phase — take your time, thinking everything through, and try to see every possibility from the outset. Ensure that coding every possibility is worth the trouble before you start. Hopefully it'll save you from some of the trouble I ended up going through. ☒

You Know You've Played Too Much Infocom When...

by Doug Atkinson (datkinson@lisp.purdy.wayne.edu)

1. ...you pass a pile of leaves and stop to count them.
2. ...you grab everything in sight, because "if it's in the game, it must have a purpose, right?"
3. ...you find yourself in a large building and start dropping objects to mark your path.
4. ...you put your books in a sealed container every time you go near water.
5. ...you try to convince your friends to play Hukka-Bukka-Beanstalk.
6. ...you try to switch to LEWD mode every time you encounter a member of the opposite sex.
7. ...you mutter "z" to yourself whenever nothing's happening.
8. ...you only walk in the eight primary compass directions.
9. ...you keep all your valuable items in your living room.
10. ...you say "Hello Sailor" to everyone you meet, in case it works this time.
11. ...you save every key you find, because there must be a lock later in the game.
12. ...you introduce yourself to people by your name, your title, the turn number, and the number of points you currently have.
13. ...you sleep with a night light to keep the grues away.
14. ...you take an inventory of your possessions whenever you're unsure what to do.
15. ...you constantly carry a pencil and paper to map your location.
16. ...you gather fluff, wherever it may be found.
17. ...you ask all questions in the form "PERSON, TELL ME ABOUT THE THING." ("Professor, tell me about the exam." "Bob, tell me about the drill press.")
18. ...you check your blood pressure whenever you're annoyed, to make sure you don't die.
19. ...you find yourself asking Sgt. Duffy to analyze anything you don't understand.
20. ...you feed sandwiches to all the stray dogs you encounter, "just in case."
21. ...you find yourself rephrasing whenever you try something that doesn't work.
22. ...in odd moments, you taste yourself, smell yourself, and feel yourself just to see what results you get.

23. ...you touch every mirror you encounter, and steel yourself against insults every time you look into one.
24. ...you refer to the celebration of [the Fourth of July/Guy Fawkes Day, depending on your country] as "gratuitous fireworks."
25. ...you look forward to spring, so you can find all the Easter eggs you've been missing.
26. ...you try not to study too hard, because with all that information buzzing around in your brain, something might get lost in the shuffle.
27. ...you dig under oak trees in search of chocolate truffles.
28. ...you abbrev all the long words you use to six letter or less.
29. ...you suggest singing "Winter Bozbarland" and "Plover the River and Frotz the Woods" while carolling.
30. ...you carry your stethoscope under your hat.
31. ...you blame your ignorance on missing documentation.
32. ...you immediately say "UNDO" after making a stupid mistake.
33. ...you argue that the afterlife exists, but that your only options in it are to restore, restart, or quit.
34. ...you can't tell the difference between a garden and a gardener.
35. ...you buy a box of sugar cubes and give them all names.
36. ...you get your Double Fanucci handicap below 30.
37. ...you constantly keep an eye out for the lost Prince of Kaldorn.
38. ...your will specifies neither cremation nor burial, but disappearance in a cloud of black smoke.

Sources for some of the more obscure references mentioned above:

1. Zork I and Leather Goddesses of Phobos. (69,105)
4. Spellbreaker.
5. Planetfall (I always wondered how it was played...).
6. Leather Goddesses of Phobos, of course.
9. Zork I.
10. The Zork series.
13. Anything in the Zork setting.
16. Hitchhiker's Guide to the Galaxy.
18. Bureaucracy.
19. Deadline, The Witness, and Suspect.
20. Hitchhiker's Guide to the Galaxy.
22. Most games, but Zork produces the best results to this one. (Smell yourself in Lurking Horror sometime, but save first.)
23. Zork I.
24. Beyond Zork (the description of the credits spell).
26. The Enchanter series.
27. Beyond Zork.
28. Any of the early games, before they extended it to nine letters.
29. Beyond Zork.
30. Sherlock.
31. Lost Treasures of Infocom, particularly Moonmist and Ballyhoo.
34. Deadline (see #28).
35. Spellbreaker.
36. Spellbreaker and Zork Zero.
37. As mentioned above, Enchanter. Does anyone remember the really old Zork choose-your-own-adventure books? In the first one, one of the false paths (just to see if you were cheating) went something like, "If you got the magic sneakers from the Prince of Kaldorn, turn to page 39." In the second book, the Prince actually turned up and gave you a set of magic sneakers. I was very pleased when I bought LToI I, finally played Enchanter and ran into the Prince of Kaldorn again (well, sort of). (He also turns up in the Invisiclues for that game, although he's using magic pajamas this time.)
38. Zork I.

Jigsaw, release 1

Parser: Inform

Author: Graham Nelson

Availability: ftp.gmd.de/if-archive/games/inform/
jigsaw.zip (footnotes are in separate file
called jigno10.zip)

Requires: ZIP interpreter

The year 1999 finds you milling about a New Year's Eve party in Century Park, counting down to the turn of the millennium. An intriguing figure in black drops a piece of a jigsaw puzzle for you to find. And there's a weird monument off at one end of the park. Could it have anything to do with the mysterious stranger? Or the strange device? If only you could get away from the party...

Jigsaw, Graham Nelson's new (and long-awaited) adventure game, promises to be every bit as interesting as its predecessor, Curses. Comparisons are inevitable, I suppose, but the two games are radically different except in their high quality, and Jigsaw manages to avoid most of the problems that made Curses less than ideal.

Structurally, the game is laid out into sixteen sections. Finishing one chapter provides the means to enter the next. The mostly linear progression helps preserve the illusion of a story in progress, instead of being a jumbled collection of get-the-bird-scare-the-snake hoops through which to jump.

The puzzles themselves are challenging without being insurmountable; players looking primarily for mind-bogglers will probably be disappointed, at least in the earlier chapters. Some of them rely on the player looking in just the right place for an item. Most are logical and straightforward, even if the right answer is not obvious. It's also very interesting to play through a puzzle or an NPC interaction more than once, trying different things, to see wildly different results. Because of the chapter-by-chapter layout of the game, it's quite possible to bungle one episode without ruining the game; failing to take the "right" action in one chapter still lets you solve another.

The game also carefully avoids giving a gender to the player. The other major NPC is cleverly described without any reference to gender at all, but in such a way that the player will fill it in on his/her own (you have, after all, been looking for this attractive person right from the Prologue).

Other than some very well-done descriptions when the player looks in the mirror, there is not any personalization of the main character. This makes it a bit harder to "get in role", but it does make it easier for a wide spectrum of players to see themselves as part of the story.

One of the most interesting features of Jigsaw is the footnotes. After you solve each episode, you can look up a non-spoiler explanation of the episode that gives its background and fills in details you may or may not know. There is also a humorous list of the game's Latin tags in translation.

The bad news about this game is that it's a first release, with many of the problems you'd expect. Sometimes the game will not recognize a synonym that is given in the description (mentioning top and bottom doors at a staircase, but only OPEN UPPER DOOR works, not OPEN TOP DOOR), has items in the description that don't exist (you are told that a copy of the Times is on an armchair; the armchair is not recognized by the parser and vanishes once you pick up the paper) or will insist on a particular phrasing (at one point, you can SHAKE HANDS with an NPC, but not SHAKE HAND or SHAKE the character's HANDS). This is especially annoying in one puzzle that depend on getting the item name exactly right to find an important clue. I assumed the object in question was scenery for quite some time. There are also a few inconsistencies in the prose, such as mentioning that a particular NPC is dead, then telling you a few paragraphs later that she's been widowed. I expect that these minor glitches will be ironed out in future releases.

The real strength of Jigsaw lies in its prose. The cheery descriptions of the party in the Prologue make it seem banal, except that you're offhandedly told that you won't live out the century. In the very first chapter of the game, you find yourself in a ringside seat to watch an assassination, with an insane person as your companion. Your next adventure gives you a subtle clue that your "friend" is actually your nemesis...or is s/he? The descriptions of each chapter are also well-done, being detailed and very different for each episode without being tedious or overwhelming.

Jigsaw is an excellent example of interactive fiction. Some of the first-release bugs are nerve-grating, but the game's strengths more than overcome them. I'm eagerly waiting for the second release.

— Laurel Halbany

The companion disk for XYZZYnews #6 contains the following game files. It's a good deal for people who have slower modems — at 2400 bps, it'd take a heck of a long time to download the contents of the companion disk. It's also a good deal for people with limited or no access to FTP sites or online services as a source for new games. If you're reading an electronic version of this issue, you can obtain this games disk with a print copy of XYZZYnews #6 by enclosing \$3.50 for postage and handling with the coupon on the bottom of this page. If you play and enjoy these games, please pay the shareware fees as applicable.

JIGSAW — by Graham Nelson. (see review this issue, page 31)

THE WINDHALL CHRONICLES— by Jeff Cassidy and C.E. Forman. Written in Inform, this intermediate adventure puts players in the shoes of the acrophobic young hero Aerin, a blacksmith's apprentice turned adventurer, who has been awarded the task of uncovering the long-lost treasure of the dragon Kirizith in order to pay off the debts of the town of Windhall. ("Sneak Previews," XYZZYnews #5)

UNDO — by Neil deMause. In this minimalist TADS game, you're ostensibly just a short ways away from winning a long, harrowing game and have just one major chal-

lenge left to face. In "Undo," that involves getting past a large hole. Beside the hole are a frog and a duck; can they help you win the game? ("Sneak Previews," XYZZYnews #5)

THE MIND ELECTRIC — by Jason Dyer. As gameplay in this Inform game begins, your mind has been captured as a pawn in the otherworldly war between two factions known as the Kaden and the Souden. The game's puzzles range from discovering the necessary passwords for getting past a locked door to engaging the human-faced but initially voiceless cube in a "Mastermind"-type game to identify a certain four-digit number. ("The First Annual IF Competition," XYZZYnews #5)

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