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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
LONG ISLAND LIGHTING COMPANY) Docket No. 50-322-OL-3
(Shoreham Nuclear Power Station,) (Emergency Planning
Unit 1)) Proceeding)

LILCO'S PROPOSED CORRECTIONS TO TRANSCRIPT

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
875	5	Replace the question mark with a period so that "during the impact?" becomes "during the impact."
885	20	Change "tha LIRO" to "that LERO"
885	25	Change "LIRO" to "LERO"
886	24	Change "let it call it either a family contingency plan." to "let us call it a family contingency plan."
887	6-8	Change "are they going to be involved in emergencies are able to make those types are going to make those type of contingency plans" to "who are going to be involved in emergencies are able to make those types -- are going to make those type of contingency plans"

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<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
887	20	Change "about here" to "about it here"
887	24-25	Change "plans for families, that is what people at home might do, while the person at work stays there, to my way of thinking," to "I would add that contingency plans for families -- that is, what people at home might do, while the person at work stays there -- to my way of thinking,"
888	6	Change "I think reduce mental role strain," to "I think it would reduce mental role strain,"
888	24	Change "suggested" to "suggests"
896	19	Change "if turned out" to "if it turned out"
898	16	Insert a comma after "EOC"
909	2	Change "Don't" to "No,"
913	6	Change "plant" to "plan"
915	7	Change "Light" to "Lighting"
915	8	Change "plant" to "plan"
915	23	Change "EPC" to EPZ"
917	12	Change "Repka" to "LILCO"
920	14	Change "traditional" to "tradition"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
920	14	Change "Don't" to "They don't"
920	18	Change "Samual Penn" to "Samuel Prince"
921	6	Change "studies" to "studied"
921	12	Change "If" to "Is"
921	20	Change "published" to "publish"
923	14	Change "welcomed" to "welcome"
926	3	Change "rolls" to "roles"
928	23	Change "Drabek" to "Drabek's"
929	8	Change "same was" to "same"
929	18-19	Replace the comma after "radioactivity" with a period. Change "if" at the beginning of the next line to "If"
932	9	Change "defused" to "dif-fused"
932	17	Change "agent as" to "agent such as"
938	22	Change "Role Candidates" to "for candidates"
945	20	Change "like here" to "like her"
949	5	Change "communicate" to "communicated"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
958	15	Change "since you would not be evacuated" to "since you would not evacuate,"
977	20	Change "primarily" to "primary"
981	2	Change "cite" to "quote"
987	17	Change "behalf" to "behaved"
993	24-25	Change "As I have perhaps. Bates" to "As I have, that perhaps Bates"
1,021	19	Change "you have doing," to "you have been doing,"
1,037	16	Change "Waited our Notification" to "Waited On Notification"
1,040	3	Change the question mark at the end of the line to a period
1,040	14	Change "Commander in Control" to "command and control"
1,047	4	Change "our notification" to "for notification"
1,059	8	Change "genetic" to "generic"
1,062	22	Change "tell him to call" to "tell him whom to call"
1,076	6	Change "ambiguous for whatever reason. A person" to "ambiguous. 'For whatever reason' -- a person"
1,082	20	Change "took and some" to "took some"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,094	19	Change "eventualized" to "eventually analyzed"
1,095	22	Change "principles" to "principals"
1,097	22	Change the question mark at the end of the line to a period
1,098	14	Change "a sample" to "an example"
1,108	2	Change "opening-ended" to "open ended"
1,124	8	Change "sites" to "cites"
1,141	21	Change "information. with" to "information, with"
1,143	12	Change "workers" to "worker"
1,148	16	Change "EPA" to "EPZ"
1,149	18	Change "objected" to "directed"
1,150	9	Change "difference than" to "differences in"
1,153	4-5	Change "face to fact" to "face-to-face"
1,164	11	Change "prophesize" to "prophesy"
1,177	21	Change "Mississogua" to "Mississauga"
1,179	15	Change "unavoidable" to "unavoidably"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,179	20	Change "didn't" to "doesn't"
1,180	25	Change "inconveivable" to "inconceivable"
1,181	2	Change "possible" to "possibly"
1,181	17	Change "clouds" to "cloud"
1,225	15	Change "Coppleman" to "Koppelman"
1,231	25	Change "I'm thinking about" to "I think I'm about at"
1,239	6	Change "one duty" to "on-duty"
1,243	6	Change "direced" to "directed"
1,248	10-11	Change "Disasters in Family" to "Disasters: Not Family"
1,255	23	Change "estimated guess" to "estimate or guess"
1,257	14	Change "Babby's" to "Babbie's"
1,258	5	Change "Babby's" to "Babbie's"
1,266	18	Change "inate" to "inert"
1,284	10	Change "public value" to "probative value"
1,287(A)	3	Change "Ericson" to "Erikson"
1,287(A)	10	Change "Ericson" to "Erikson"
1,311	18	Change "slags" to "slag"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,314	6-7	Change "And you remember that a storm came up and cooled" to "And you remarked that a storm might come up and cool"
1,314	19-24	Change "And the book, you interpreted this to mean at Buffalo Creek, this is his first reaction after the flood. The people of Buffalo Creek didn't mention the casual mention of the storms, particularly as a form of relief" to "And in the book, you interpreted this to mean that at Buffalo Creek -- this is his first reaction after the flood -- the people of Buffalo Creek didn't welcome the casual mention of storms, particularly as a form of relief"
1,315	15	Change " -- old man later on" to "Now you met the same old man later on"
1,315	24	Change "sensitivity" to "insensitivity"
1,315	25	Change "is associated" to "associated"
1,316	3	Change "You made a study of Arnold" to "You made a study of the Buffalo Creek disaster for Arnold"
1,316	6	Change "everything" to "the material"
1,316	15-16	Change "the rhythm of the suit itself. That" to "the rhythm of the suit itself that"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,317	8	Change "encountered" to "en-counter"
1,317	20	Change "said" to "say"
1,317	21	Change "people" to "people I interviewed"
1,320	3	Change the period after "correct" to a question mark
1,322	5	Change "in a thick file" to "and a thick file"
1,322	14	Change "in a thick file" to "and a thick file"
1,322	20	Change "be a factor of" to "be a factor in"
1,335	18-19	Change "not more than to argument, in turn, may generate research and" to "no more than arouse argument, it will prove valuable, for argument in turn may generate research. And"
1,335	23	Change "Killian" to "Killian's"
1,335	25	Change "this 1952" to "his 1952"
1,338	6	Insert a comma after "names"
1,338	13-14	Change "on the two weeks, Killian's 1952 article, and the 1958 article" to "only the two works, Killian's 1952 article, and Form and Nosow's 1958 article"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,338	25	Change "these roles despite the concern" to "those roles despite concern"
1,339	2	Change "units shut" to "units were safely shut"
1,339	19	Change "Sam" to "Halifax"
1,341	5	Delete "the"
1,341	9	Change "emergency" to "emergency plans"
1,344	21	Change "encounter" to "encounter a"
1,367	5	Change "Halofast" to "Halifax"
1,367	7	Change "pretrial" to "pre-filed"
1,370	6	Change "principals" to "principles"
1,371	17	Change "two workers" to "of workers"
1,377	23	Change "problems" to "province"
1,378	10	Change "valuable" to "value"
1,378	15	Change "to him" to "Tom"
1,379	22	Change "this is more likely" to "are they more likely"
1,380	2	Change "denied" to "tried"
1,387	2	Change "and rule" to "and I will rule"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,388	12	Change "theories" to "theory"
1,391	15-16	Change "agreement of Dr. Cole of" to "agreement with Dr. Cole on"
1,392	12	Change "There's" to "Does"
1,392	13-14	Change "included in Rita White's master thesis of" to "include Meda White's masters thesis at"
1,392	16	Change "Rita" to "Meda"
1,393	1	Change "Rita" to "Meda"
1,393	13	Change "books" to "book"
1,395	8	Change "books" to "book"
1,395	9	Change "relate to" to "Meda"
1,395	19	Change "(Witness J. Johnson)" to "(Witness Erikson)"
1,396	13	Insert "(Witness J. Johnson)" before the answer
1,396	25	Change "grease" to "agree"
1,411	15	Change "instant" to "instance"
1,416	12	Change "MITR" to "MITRE"
1,416	13	Change "M-i-t-r" to "M-i-t-r-e"
1,416	19	Change "point seen" to "point not seen"
1,417	10	Change "Golhaber" to "Goldhaber"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,420	10	Change "at" to "as"
1,420	14	Change "become" to "come"
1,422	5	Change "salients" to "salience"
1,422	7	Change "salients" to "salience"
1,422	19	Change "salient" to "salience"
1,422	22	Change "salients" to "salience"
1,423	23	Change "of better views" to "of interviews"
1,432	19	Change "techniques you" to "techniques she"
1,456	6	Change "McIntyre" to "McIntire"
1,456	8	Change "McIntyre" to "McIntire"
1,456	24	Change "McIntyre" to "McIntire"
1,457	5	Change "McIntyre" to "McIntire"
1,472	14	Change "I think we just assume dispense the summary" to "I think we'd just as soon dispense with the summary"
1,472	15	Change "I think we just assume dispense the summary" to "I think we'd just as soon dispense with the summary"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
1,480	15	Change "I have called" to "I have what is called"
1,488	21	Change "question" to "objection"
1,528	5	Change "little company's" to "LILCO"
1,546	4	Change "Prince and" to "Fritz and"
1,740	16	Change "Slovvic" to "Slovic"
1,744	19	Change "Slovac" to "Slovic"
ff. 1,808		A revision of Attachment 14 to LILCO's prefiled testimony on shadow phenomenon should have been bound in the record following Tr. 1808. Pages of the revised attachment were mistakenly bound in after Suffolk County Exhibit EP-2, following Tr. 1750. A complete copy of revised Attachment 14 is attached to these proposed transcript corrections.
1,838	10	Change "Don Sorenson" to "John Sorensen"
2,038	23	Change "not" to "no"
2,072	15	Change "con injury up you some" to "conjure up some"
2,136	15	Change "to answer" to "to your answer"
2,300	18	Change "Dr. Milette" to "Dr. Milette"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
2,351	16	Change "pick" to "picking"
2,362	4	Change "Cordero" to "Cordaro"
2,362	10	Change "Cordero" to "Cordaro"
2,363	10	Change "Cordero" to Cordaro"
2,363	14	Change "Cordero" to "Cordaro"
2,363	22	Change "Cordero" to "Cordaro"
2,364	8	Change "mean" to "meet"
2,380	21	Change "deliberate" to "de- liberately"
2,381	12	Change "wish" to "with"
2,386	18	Change "Cordero" to "Cordaro"
2,387	11	Change "Cordero" to "Cordaro"
2,387	13	Strike "f"
2,387	16	Change "Cordero" to "Cordaro"
2,388	4	Change "Cordero" to "Cordaro"
2,388	8	Change "Cordero" to "Cordaro"
2,388	12	Change "Cordero" to "Cordaro"
2,389	7	Change "Cordero" to "Cordaro"
2,389	19	Change "Cordero" to "Cordaro"
2,389	22	Change "Cordero" to "Cordaro"
2,401	7	Change "same it" to "same as it"
2,401	21	Change "EPA" to "EPZ"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
2,402	17	Change "don't the" to "don't think the"
2,406	15	Change "undifferntiated" to "undifferentiated"
2,416	13	Change "origina" to "original"
2,423	24	Change "puzzles" to "puzzled"
2,430	3	Change "or not" to "not of"
2,452	13	Change "shold" to "should"
2,456	19	Change "There" to "They"
2,456	22	Change "greet" to "green"
2,478	9	Change "incurs" to "occurs"
2,524	24	Change "Iked" to "liked"
2,542	22	Change "nod" to "node"
2,562	16	Change "Contentio's" to "contentions"
2,590	17	Change "does" to "dose"
2,610	2	Change "competence" to "confidence"
2,612	12	Change "scraping" to "starting"
2,614	8	Change "signs" to "states"
2,618	19	Change "regs" to "routes"
2,625	11	Change "safe" to "same"
2,630	8	Change "EDS" to "EBS"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
2,634	10	Change "vehicles" to "vehicle"
2,663	15	Change "minimu" to "minimum"
2,691	20	Change "disparied" to "disparate"
2,694	17	Change "difference" to "indifference"
2,694	22	Change "Short Creek Road" to "a short link to Rose"
2,694	25	Change "of so" to "feet or so"
2,695	19	Change "road" to "Bay Road"
2,702	9	Change "substitute" to "substantive"
2,748	2	Change "the Carlo" to "the Monte Carlo"
2,756	22	Change "enter" to "exit"
2,758	13	Change "Main" to "Maine"
2,758	14	Change "Main" to "Maine"
2,974	22	Change "EPC" to "EPZ"
2,986	22	Change "htink" to "think"
3,092	25	Change "say" to "stay"
3,101	11	Change "of" to "is"
3,112	14	Change "now" to "not"
3,173	18	Change "Sanai" to "Sinai"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
3,322	8	Change "guides are afforded" to "guides afforded"
3,349	7	Change "Dr" to "Judge"
3,430	8	Change "1981" to "1982"
3,743	10	Change "cite" to "site"
3,750	24	Change "behaviorlist" to "behavioralist"
3,779	12	Change "Zuegin" to "Zeugin"
3,781	1	Change "capaciry" to "capacity"
3,802	15	Change "amouht" to "amount"
3,859	6	Change "director" to "direction"
3,861	4	Change "Netson" to "Netsim"
4,226	9	Change "Brooke" to "Brookhaven"
4,347	13	Change "perceive" to "proceed"
4,398	10	Change "system-like" to "system-wide"
4,472	17	Change "review" to "renew"
4,825	5	Change "Hademneck" to "Haddam Neck"
4,828	12	Change "Hedemneck" to "Haddam Neck"
4,843	5	Change "floored" to "explored"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
4,848	23	Change "progressed" to "pro- cessed"
4,857	3	After "potentially" add the word "as"
4,866	21	Change "LILCO" to "Local"
4,867	1	Change "Lilco" to "local"
4,867	3	Change "of the 26th" to "on Contention 26"
4,868	9	Change "Q" to "A"
4,922	13, 24	Change "Lanpher" to "Farnham"
4,937	16	Change "is" to "has"
4,938	6	Change "the" to "that"
4,939	9	Change "of" to "and"
4,954	18	Change "in coder" to "encoder"
4,958	16	Change "blaced" to "blackened"
4,960	7	Change "individuals" to "in- dividual"
4,960	7	After "individual" add the word "sirens"
4,963	5,8	Change "Patchough" to "Patchogue"
4,975	7	Change "Wilde" to "Wyle"
4,991	16	Change "referened" to "refer- enced"
5,000	17	Change "tima" to "time"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,004	9	Change "man" to "map"
5,012	7	Change "difficult" to "diffi- culty"
5,042	9	Change "peopel" to "people"
5,057	21	Change "FEME" to "FEMA"
5,060	6	Change "leading" to "leaving"
5,063	9	Change "typo" to "topo"
5,069	25	Change "Farley" to "Varley"
5,070	2	Change "Farley" to "Varley"
5,095	7	Change "thrt" to "that"
5,099	14	Change "Lawa" to "Laws"
5,119	10	Change "FDS" to "FTS"
5,166	24	Change "1080" to "1980"
5,169	5	Change "1065" to "1969"
5,196	24	Change "restrate" to "restate"
5,200	19	Change "ZI" to "I"
5,204	21	Change "commencing" to "com- menting"
5,238	24	Change "Farley" to "Varley"
5,239	1	Change "Farley" to "Varley"
5,239	3	Change "Farley" to "Varley"
5,239	3	Change "Farley" to "Varley"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,253	1	Change "Sand" to "Sag"
5,253	6	Change "Sand" to "Sag"
5,253	8	Change "Sand" to "Sag"
5,260	18	Change "WALM" to "WALK"
5,268	22	Change "Milette" to "Mileti"
ff. 5,337		A copy of LILCO's prefiled written testimony on Contention 58 (Notification to Special Facilities and Hearing Impaired Persons at Home), which should have been bound into the transcript following Tr. 5,337, was inadvertently omitted.
5,342	15	Change "thresed" to "these"
5,402	6	Change "abulatory" to "ambulatory"
5,403	15	Insert "not" after "am"
5,531	9	Change "McMurra" to "McMurray"
5,534	7	Change "McMurra" to "McMurray"
5,587	7	Change "Farmham" to "Farnham"
5,588	15	Change "unlike" to "unlikely"
5,589	4	Change "Farmham" to "Farnham"
5,590	1	Change "Farmham" to "Farnham"
5,590	23	Change "Farmham" to "Farnham"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,591	14	Change "contrators" to "contractors"
5,591	23	Change "Farmham" to "Farnham"
5,593	6	Change "Farmham" to "Farnham"
5,600	23	Change "location" to "relocation"
5,602	11	Change "assuing" to "assuming"
5,618	9	Change "how" to "now"
5,620	6	Change "Devario" to "Daverio"
5,620	6	Change "Farmham" to "Farnham"
5,623	7	Change "plain" to "explain"
5,636	13	Change "nt" to "not"
5,646	16	Change "are" to "or"
5,650	2	Change "were" to "we"
5,652	24	Change "Farmham" to "Farnham"
5,654	16	Insert "is" after "it"
5,655	19	Change "difference" to "different"
5,657	20	Change "?" to "."
5,669	19	Change "Zoegin" to "Zeugin"
5,670	23	Change "Zoegin" to "Zeugin"
5,691	5	Change "Farmham" to "Farnham"
5,692	12	Change "Farmham" to "Farnham"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,693	1	Change "Farmham" to "Farnham"
5,694	14	Change "Farmham" to "Farnham"
5,701	11	Insert "haven't" after "changed"
5,704	5	Insert "on" after "and"
5,730	5	Change "insread" to "instead"
5,736	22	Change "convered" to "cov- ered"
5,738	2	Change "advise" to "advice"
5,743	19	Change "Leiberman" to "Lieberman"
5,743	21	Change "Leiberman" to "Lieberman"
5,744	13	Change "Leiberman" to "Lieberman"
5,744	15	Change "Leiberman" to "Lieberman"
5,750	24	Change "Gridge" to "Ridge"
5,763	7	Change "Sagrin" to "Saegert"
5,763	17	Change "Cordara" to "Cordaro"
5,785	1	Insert "not" after "would"
5,787	18	Change "taget" to "target"
5,788	1	Change "English" to "Spanish"
5,829	25	Change "organization by" to "organization. By"
5,834	12	Change "LIRO" to "LERO"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,849	15	Change "in our federal agencies" to "in other federal agencies"
5,852	11	Change "LILCO" to "local"
5,862	7	Change "handling" to "hailing"
5,863	9	Change "Daverios" to "Daverio"
5,865	4	Change "giving" to "given"
5,873	12	Change "it in half" to "in and out"
5,875	2	
5,881	24	Change "Daverios" to "Daverio"
5,908	1	Change "one" to "in"
5,913	24	Change "as" to "has"
5,952	8	Change "ask" to "answer"
5,955	18	Change "planning" to "planner"
5,963	19	Change "Lieberman" to "Lieberman"
5,963	23	Change "Zuegin" to "Zeugin"
5,965	7	Change "Leiberman" to "Lieberman"
5,965	13	Change "Maleti" to "Mileti"
5,968	25	Change "Leiberman" to "Lieberman"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
5,987	24	Change "on" to "one"
6,020	5	Change "LAURENSEN" to "ZAHNLEUTER"
6,039	12	Change "plan of procedures." to "the plan or procedures."
6,042	4	Place a comma after the word "office"
6,042	5	Place a comma after the word "considerations"
6,042	14	Change "Brookhave" to "Brookhaven"
6,043	19	Change "REC" to "RAP"
6,046	12	Change "HobbsZ" to "Hobbs"
6,047	3	Delete the comma after the word "transmitter"
6,064	2	Change "not" to "now"
6,067	8	Change "offsite" to "onsite"; Change "hold" to "held"
6,073	5	Change "missing" to "listing all"
6,083	8	Change "here" to "half"
6,085	2	Change "referred to the" to "referred to in the"
6,086	18	Change "plant" to "plan"
6,093	16	Change "RENN" to "MILLER"
6,101	1	Change "too" to "two"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
6,106	6	Change "because was" to "because it was"
6,108	11	Change "emergency frequency radio" to "emergency radio system"
6,113	2	Change "don't that" to "don't think that"
6,126	20	Change "proportion" to "portion"
6,144	7	Change "no" to "not"
6,150	3	Change "protected" to "detected"
6,151	13	Change "is" to "isn't"
6,162	9	Change "stimulate" to "simulate"
6,162	18	Change "got" to "go"
6,164	3	Change "BOE" to "DOE"
6,169	5	Add the word "he" after the word "if"
6,190	21	Change "Policy" to "Police"
6,193	2	Change "Policy" to "Police"
6,194	18	Change "every" to "ever"
6,196	24	Change "Rex" to "RECS"
6,197	25	Change "Rex" to "RECS"
6,202	10	Change "of" to "and"
6,203	14	Change "Office" to "Officer"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
6,205	10	Change "positive" to "possible"
6,205	12	Change "the" to "they"
6,208	7	Change "that under" to "that: under"
6,208	12	Do not begin new paragraph before "However"
6,208	13	Begin new paragraph before "Inspector"
6,213	11	Change "oong" to "long"
6,223	15	Change "MR. ZAHNLEUTER" to "JUDGE LAURENSEN"
6,465	25	Change "Dr. Cordar" to "Dr. Cordaro"
6,483	11	Change "offhandage of CB" to "offhand AHRC"
6,490	11	Change "it's inaccurate" to "it's accurate"
6,500	2	Change "and engress" to "and ingress"
6,565	3	Change "was Madder (phonetic)" to "was Mather"
6,568	15	Change "DiVerio's" to "Daverio's"
6,573	2	Change "DiVerio" to "Daverio"
6,576	6	Change "EOC NC" to "EOC/ENC"
6,576	7	Change "EOC NC" to "EOC/ENC"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
6,623	12	Change "resondent" to "respondent"
6,688	21	Change "aerial" to "areal"
6,734	18	Change "spacial" to "spatial"
6,736	1	Change "special" to "spatial"
6,736	6	Change "special" to "spatial"
6,736	21	Add "little" before "consequence"
6,747	1, 21	Change "5-6" to "V-6"
6,762	22	Change "Hurd" to "Herr"
6,763	6, 8	Change "Hurd" to "Herr"
6,820	3	Change "93(b)" to "97(b)"
6,839	18	Change "voer" to "over"
6,839	24	Change "caididate" to "candidate"
6,962	17	Change "Brookhave" to "Brookhaven"
6,993	4	Change "Main" to "Maine"
7,002	5	Change "paly" to "play"
7,081	7	Change "neighborheed" to "neighborhood"
7,081	19	Change "Williams" to "William"
7,084	18	Change second "Nassau" to "Suffolk"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
7,091	9	Change "It if" to "If it"
7,093	22	Change "acquaired" to "acquired"
7,100	15	Change "date" to "data"
7,101	19	Change "ook" to "took"
7,101	21	Change "hd" to "had"
7,102	7	Change "courst" to "course"
7,247	17	Change "fell" to "felt"
7,250	18	Change "the State" to "they"
7,286	5	Change first "the" to "they"
7,286	6	Change "the" to "they"
7,292	18	Change "hyrotical" to "theoretical"
7,393	16	Change "thing" to "think"
7,398	11	Change "promptely" to "promptly"
7,400	24	Change "two" to "tow"
7,400	24	Change "plact" to "place"
7,402	14	Change "whan" to "when"
7,408	14	Change Soday" to "Sunday"
7,416	22	Change "focucing" to "focusing"
7,425	23	Insert "think" after "don't"
7,434	16	Change "anomly" to "anomaly"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
7,440	3	Change "Massau" to "Nassau"
7,447	7	Change "Lous" to "Louis"
7,450	14	Change "officery" to "officers"
7,467	18	Change "throug" to "through"
7,467	21	Change "fort" to "sort"
7,481	24	Change second "is" to "in"
7,487	25	Change "investigations" to "evacuations"
7,530	10	Change "that" to "did"
7,550	24	Change "how" to "who"
7,565	15	Change "call exactly" to "call knew exactly"
7,566	3	Delete "to"
7,566	12	Change "phone" to "phone call"
7,569	7	Change "grip" to "grid"
7,582	23	Change "Darell" to "Darrell"
7,583	10	Change "Darell" to "Darrell"
7,588	21	Change "impaire" to "impaired"
7,594	10	Change "the" following "when" to "they"
7,595	12	Change "at" to "as"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
7,614	12	Change "judt" to "just"
7,617	15	Change "Finlison" to "Finlayson"
7,623	4	Change "car" to "card"
7,625	2	Delete "in" after "been"
7,640	23	Change "adequace" to "adequacy"
7,644	18	Insert "that" before "require"
7,645	24	Change "vent" to "event"
7,646	17	Delete "want to"
7,676	17	Change "how" to "show"
7,677	9	Change "of" following "plan" to "or"
7,678	16	Insert space between "the" and "last"
7,708	3	Change "5.1.2.A" to "5.1.2.a"
7,708	13	Change "exactly" to "example"
7,709	25	Change "nintiate" to "initiate"
7,711	18	Change "ampligy" to "amplify"
7,711	24	Change "os" to "of"
7,737	23	Change "74" to "75"
7,739	1	Change "notive" to "notify"
7,742	20	Change "decision" to "decisions"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
7,744	4	Change "No" to "Now"
7,746	12	Change "functions" to "function"
7,746	13	Change "poll" to "pool"
7,882	7	Change "Ganne" to "Ginne"
7,882	24	Change "reregistered" to "preregistered"
7,887	9	Change "-hat" to "that"
7,900	21	Change "Goldblat" to "Goldblatt"
7,900	25	Change "Goldblat" to "Goldblatt"
7,912	21	Change "energy" to "interview"
7,916	5	Change "Alberton" to "Albertin"
7,916	23	Change "these" to "this"
7,917	14	Change "keeping" to "keep"
7,917	19	Change "tast" to "test"
7,923	18	Change "update" to "updating"
7,927	12	Change "happened" to "happen"
7,932	8	Change "underly" to "underlie"
7,952	10	Change "partically" to "partially"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
7,960	5	Change "Kiline's" to "Kline's"
7,968	18	Change "Spril" to "Spring"
7,992	16	Change "substances" to "substance"
7,994	6	Change "routed" to "routes"
7,999	19	Change "5-8a" to "V-8a"
8,022	5	Change "Transportion" to "Transportation"
8,033	2	Change "Of" to "On"
8,039	2	Change "conference" to "confidence"
8,039	6	Change "conference" to "confidence"
8,063	18	Change "Ling" to "Long"
8,092	5	Change "trown" to "thrown"
8,094	15	Change "instanc" to "instant"
8,116	8	Change "buse" to "buses"
8,123	16	Change "identific" to "identified"
8,182	14	Change "1908" to "1980"
8,188	13	Change "tht" to "that"
8,193	2	Change "underly" to "underlie"
8,194	16	Change "underly" to "underlie"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
8,221	14	Change "assuing" to "assuming"
8,291	13	Change "root" to "route"
8,330	3	Change "4-74(b)" to "IV-74(b)"
8,331	16	Change "4-74(b)" to "IV-74(b)"
8,333	6	Change "5-7" to "V-7"
8,333	7	Change "5-7" to "V-7"
8,335	22	Change "priary" to "primary"
8,350	9	Change "4-74(b)" to "IV-74(b)" and "appendix z" to "appendix a"
8,350	10	Change "4-74(b)" to "IV-74(b)"
8,409	15	Change "O" to ")"
8,414	24	Change "latter" to "letter"
8,490	11	Change "dil" to "dual"
8,567	23	Change "shet" to "set"
8,580	16	Change "plant" to "plan"
8,581	11	Change "Jackson" to "Jefferson"
8,584	7	Insert "A." before "It does."
8,700	6	Change "averting" to "averring"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
8,739	13	Change "ublic Health" to "Public Health"
8,936	23	Change "1989" to "1979"
8,941	18	Change "DOE RAT" to "DOE RAP"
8,965	21	Change "the Binna" to "the Ginna"
9,054	3	Change "is so different" "is different"
9,070	24	Change "(.)" to "(,)"
9,088	4	Change "residence" to "residents"
9,092	21	Change "Meyer" to "Mayer"
9,094	18	Change "McCleskey" to "Letsche"
9,095	1	Change "McCleskey" to "Letsche"
9,137	15	Change "Zuegin" to "Zeugin"
9,173	16	Change "ultimate we" to "ultimately they"
9,178	12	Change "Now" to "No"
9,181	20	Change "Kollelman" to "Koppelman"
9,209	16	Change "Sinia" to "Sinai"
9,211	22	Change "by" to "my"
9,216	7	Change "plain" to "plane"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
9,218	1	Change "Boses Two" to "BOCES II"
9,220	13	Change "Mannerville" to "Manorville"
9,220	13	Change "Manner" to "Manor"
9,220	15	Delete "Manner"
9,251	17,22	Change "Erickson" to "Erikson"
9,252	8,11,21	Change "Erickson" to "Erikson"
9,253	3,13	Change "Erickson" to "Erikson"
9,254	3,9,14	Change "Erickson" to "Erikson"
9,255	2	Change "Erickson" to "Erikson"
9,255	18,21	Change "McIntyre" to "McIntire"
9,591	17-18	Change "Rogavin" to "Rogovin"
9,611	17	Change "was" to "way"
9,627	3	Change "clement" to "inclement"
9,636	24	Change "sort" to "short"
9,640	22	Change "Ragovin" to "Rogovin"
9,645	11	Change "strick" to "struck"
9,648	1	Change "phrase" to "phase"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
9,651	14	Change "gety" to "get"
9,654	5	Change "with" to "which"
9,655	9	Change "or" to "of"
9,661	14	Insert "no" after "was"
9,683	12	Change "rumon" to "rumor"
9,721	4	Change "be" to "have"
9,740	1	Change "live" to "love"
9,947	19	Change "Zaunleuter" to "Zahnleuter"
10,016	13	Change "but" to "put"
10,049	18	Change "een sthem" to "seen them"
10,160	11	Change "Daverio" to "Cordaro"
10,174	11	Change "contaced" to "contacted"
10,175	6	Change "ransient" to "transient"
10,176	12	Change "budding" to "abutting"
10,177	9	Change "budding" to "abutting"
10,198	13	Change "Percell" to "Purcell"
10,202	22	Change "divide" to "divulge"
10,203	6	Change "dissimate" to "disseminate"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
10,218	19	Change "by" to "buy"
10,239	22	Change "Noah" to "NOAA"
10,287	25	Change "Aker" to "Acker"
10,344	8	Change "Aker" to "Acker"
10,363	15	Change "spole" to "spoke"
10,372	20	Change "would" to "wouldn't"
10,385	25	Change "RAD" to "RAP"
10,447	18	Change "ver" to "very"
10,508	16	Change "REX" to "RECS"
10,514	12	Change "REX" to "RECS"
10,538	3	Change "tract" to "track"
10,546	12	Change "preds" to "press"
10,549	23	Change "is" to "its"
10,605	2	Change "Frequencies" to "Frequency is"
10,610	4	Change "force" to "for"
10,623	16	Change "suit" to "soup"
10,646	12	Change "are mouses" to "wear mouse ears"
10,653	16	Change "prophesize" to "prophecy"
10,654	15	Change "prophesize" to "prophecy"
10,666	25	Change "is" to "it"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
10,728	22	Change "soul" to "sole"
10,730	20, 25	Change "X" to "x"
10,732	9	Change "Stephens" to "Steffens"
10,734	16	Change "Margerger" to "Marburger"
10,753	12	Change "work" to "worked"
10,769	11	Change "cite" to "citing"
10,778	23	Change "peoples decision." to "peoples' decision?"
10,806	3	Change "dessiminate" to "disseminate"
10,813	17	Change "understanding" to "understating"
10,813	24	Change "affect" to "effect"
10,814	25	Change "Artschuller" to "Altschuler"
10,815	1	Change "Artschuller" to "Altschuler"
10,822	14	Change "that" to "but"
10,824	3	Change "reasonable" to "reasonably"
10,833	11	Change "along" to "alone"
10,845	16	Change "a Westchester" to "the Westchester"
10,857	11	Change "Ruben" and "Reuben" to "Rubin"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
10,860	15	Change "interfacting" to "interfacing"
10,932	12	Change "highsight" to "hind-sight"
10,938	19	Change "A" to "Q"
10,969	8	Change "polulace" to "populace"
10,993	18	Change "tiddle" to "tittle"
11,145	11,13, 14	Change "Factor" to "Fakler"
11,158	24	Change "who" to "whose"
11,185	17	Change "is" to "as"
11,186	21	Change "an" to "and"
11,186	23	Change "LERP" to "LERO"
11,264	19	Change "Bahr" to "Behr"
11,434	17	Change "Letche" to "Letsche"
11,440	17	Change "Seal" to "Seale"
11,442	5	Change "Seal" to "Seale"
11,555	12	Change "calling" to "culling"
11,558	10	Change "EP 35" to "EP 65"
11,562	11	Change "subpatters" to "subpatterns"
11,565	8	Change "patters" to "patterns"
11,579	7	Change "Devario" to "Daverio"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
11,589	7	Change ".3" to "Point 3"
11,593	10	Change ".3" to "Point 3"
11,601	1	Change "typicall" to "typically"
11,604	8	Change "typicall" to "typically"
11,611	1	Change "brining" to "bringing"
11,626	11	Change "undetstanding" to "understanding"
11,628	18	Change "offices" to "officers"
11,664	10	Change "chesser" to "cheshire"
11,693	22	Change "kek" to "key"
11,698	25	Change "attendent" to "attendance"
11,715	14	Change "521" to "5.2.1"
11,765	25	Change "in" to "is"
11,837	23	Change "locsl" to "local"
11,869	22	Change "roblems" to "problems"
11,891	16	Change "Bahr" to "Behr"
11,897	2	Change "Weismant's" to "Weismantle's"
11,921	20,23,25	Change "Bahr" to "Behr"
11,922	3,20	Change "Bahr" to "Behr"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
11,923	1,2, 5,9,12	Change "Bahr" to "Behr"
12,012	19	Change "wrrk" to "week"
12,013	14	Change "leade" to "lead"
12,014	24	Change "coordinatio" to "coordination"
12,017	4	Change "witnesses" to "wit- nessed"
12,024	20	After "were" insert "not"
12,031	6	Change "detractation" to "distractation"
12,055	2,3	Change "David Dorff" to "Davidoff"
12,068	16	Change "rate" to "rare"
12,106	24	Change "Irsin" to "Irwin"
12,120	11	Change "sursue it" to "pursue it"
12,702	12	Change "not" to "don't"
12,762	24	Change "dat" to "day"
12,901	5	Change "tings" to "things"
12,932	24	Change "tome" to "home"
12,946	13	Change "ocen" to "ocean"
12,947	13	Change "Kowiesnis" to "Kowieski"
12,963	2	Change "resumptioning" to "resumption"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
13,021	7	Change "gen" to "get"
13,090	1	Change "Monathan" to "Monaghan"
13,090	23	Change "first" to "fire"
13,092	10	Change "LIRO" to "LERO"
13,094	10	Change "policy" to "police"
13,094	10	Change "of" to "or"
13,099	10	Change "hither" to "dither"
13,120	5	Change "have" to "how"
13,139	25	Change "responsive" to "responsiveness"
13,180	9	Change "day" to "say"
13,191	22	Change "neighbords" to "neighborhoods"
13,207	14	Change "now" to "know"
13,214	19	Change "scraming" to "screaming"
13,282-A	10	Change "there" to "thou"
13,302	25	Change "enountered" to "encountered"
13,327	10	Change "interfering" to "interfere"
13,337	14	Change "stree" to "stress"
13,350	3	Change "thought" to "though"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
13,356	25	Change "MEGA" to "MAGER"
13,357	1	Change "MEGA" to "MAGER"
13,357	2	Change "MEGA" to "MAGER"
13,358	12	Change "MEGA" to "MAGER"
13,358	14	Change "MEGA" to "MAGER"
13,361	22	Change "MEGA" to "MAGER"
13,361	24	Change "MEGA" to "MAGER"
13,362	5	Change "MEGA" to "MAGER"
13,362	10	Change "MEGA" to "MAGER"
13,362	14	Change "MEGA" to "MAGER"
13,363	8	Change "MEGA" to "MAGER"
13,363	12	Change "MEGA" to "MAGER"
13,365	2	Change "MEGA" to "MAGER"
13,365	17	Change "MEGA" to "MAGER"
13,393	24	Change "deposotion" to "deposition"
13,395	17	Change "the" to "he"
13,441	24	Change "stances" to "instance"
13,477	20	Change "Monathan" to "Monaghan"
13,501	21	Change "majorit" to "majority"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
13,518	8	Change "protions" to "portions"
13,546	26	Change "begarding" to "regarding"
13,550	22	Change "filed" to "filled"
13,551	11	Change "they" to "the"
13,581	17	Change "means" to "teams"
13,596	16	Change "IMPO" to "INPO"
13,655	2	Change "isotobes" to "isotopes"
13,655	7	Change "isotobes" to "isotopes"
13,655	10	Change "isotobes" to "isotopes"
13,655	12	Change "isotobes" to "isotopes"
13,656	16	Change "isotobes" to "isotopes"
13,657	2	Change "isotobes" to "isotopes"
13,657	6	Change "isotobes" to "isotopes"
13,671-A	15	Change "Codaro" to "Cordaro"
13,702	19	Change "limin" to "limit"
13,706	5	Change "FERP" to "FRERP"
13,737	14	Change "341" to "3.4.1"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
13,737	20	Change "Rex" to "RECS"
13,737	20	Change "341" to "3.4.1"
13,742	3	Change "Pirvo" to "Pirfo"
13,742	9	Change "Pirvo" to "Pirfo"
13,742	16	Change "Pirvo" to "Pirfo"
13,758	22	Change "that" to "than"
13,758	22	Change "that" to "then"
13,778	8	Change "shild" to "shield"
13,780	13	Change "what" to "want"
13,795	14	Change "being" to "be"
13,883	10	Change "starting the" to "starting to"
13,894	7	Change "relevation" to "reve- lation"
13,986	18	Insert "not" after "will"
13,995	6	Change "Iwin" to "Irwin"
14,001	6	Change "Lipski" to "Lipsky"
14,002	12	Change "Lipski" to "Lipsky"
14,009	20	Change "taking" to "talking"
14,013	20	Change "Skaleze" to "Scalice"
14,014	18	Change "Lipski" to "Lipsky"
14,015	3	Change "Devario" to "Daverio"
14,036	8	Change "rluppauge" to "Hauppauge"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
14,052	15	Change "Brodenick" to "Bordenick"
14,058	21	Change " Clason" to "Clawson"
14,065	10	Change "IMPEL" to "IMPELL"
14,065	14	Change "IMPEL" to "IMPELL"
14,065	15	Change "IMPEL" to "IMPELL"
14,065	19	Change "IMPEL" to "IMPELL"
14,065	17	delete "or" following "information"
14,066	4	Delete "of" following "health"
14,089	2	Change "irridation" to "radiation"
14,092	21	Change "disbursed" to "dispersed"
14,119	11	Change "release" to "releases"
14,122	24	Change "has" to "adds"
14,146	11	Change "ignire" to "inquire"
14,153	6	Change "esponde" to "sponte"
14,181	8	Change "brochure" to "brochures"
14,181	8	insert "an" before "annual"
14,279	20	Change "physicall" to "physically"
14,283	17	Change "adsorbed" to "absorbed"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
14,316	5	Change "review" to "radio"
14,316	6	Change "review" to "radio"
14,671	6	Change "Scilichi" to "Scalice"
14,671	6	Delete (sic)
14,700	25	Change "your letter" to "your question"
14,729	21	Change "Mr. McCleskey" to "Mrs. McCleskey"
14,794	2	Change "None of" to "One of"
14,871	3	Change "Mr. McCleskey" to "Mrs. McCleskey"
14,975	1	Change "Mr. Zahn" to "Mr. Zahnleuter"
15,285	7	Change "his" to "this"
15,286	15	Change "40.47" to "50.47"
15,291	19	Change "teminated" to "terminated"
15,296	3	Change "And deplowing" to "underplowing"
15,296	11	Change "0654-2M" to "0654 II.M"
15,297	9	Change "specifids" to "specifics"
15,297	25	Change "L-654" to "NUREG-0654"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
15,309	4	Change "plan" to "plant"
15,319	8	Change "istobe" to "isotope"
15,321	25	Change "IMPEL" to "IMPELL"
15,322	21	Change "Mitara" to "Mitra"
15,329	2	Change "5.32B" to "5.3.2.b"
15,330	11	Change "OPIP 3.51" to "OPIP 3.5.1"
15,330	16	Change "OPIP 3.51" to "OPIP 3.5.1"
15,330	18	Change "OPIP 3.51" to "OPIP 3.5.1"
15,330	25	Change "you" to "your"
15,334	10	Delete "it" following "does"
15,341	2	Change "treshold" to "threshold"
15,341	6	Change "Daverio" to "Watts"
15,352	16	Change "0654.2.m." to "0654 II.M"
15,359	1	Change "5.22" to "5.2.2"
15,363	21	Change "." to ","
15,346	19	Change "estiatiated" to "estimated"
15,367	6	Change "Genna" to "Ginna"
15,371	22	Change "20.105A" to "20.105(a)"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
15,372	8	Insert "no" before "guidance"
15,372	13	Change "particular" to "particularly"
15,374	7	Change "20.105A" to "20.105(a)"
15,434	11	Change "Cordado" to "Cordaro"
15,441	6	Change "hamber" to "hamper"
15,452	23	Change "include." to "include them."
15,466	16	Add "go" after "did"
15,471	3	Change "Scalici" to "Scalice"
15,477	10	Change "discention" to "descension"
15,492	21	Change "explain" to "explained"
15,505	24	Change "not" to "no"
15,509	21	Add "do not" after "just"
15,519	4	Change "had" to "made"
15,522	22	Change "fuctions" to "functions"
15,526	14	Change "reducting" to "reducing"
15,527	15	Change "legall" to "legally"
15,538	11	Change "lest" to "less"
15,539	18	Change "isotobes" to "isotopes"

<u>Tr. Page No.</u>	<u>Line No.</u>	<u>Correction</u>
15,540	25	Change "trangient" to "transient"
15,544	14	Change "synes" to "sinks"
15,555	10	Change "gases" to "casks"
15,608	9	Change "requeted" to "requested"
15,621	2	Change "isotobes" to "isotopes"
15,621	15	Change "isotcbes" to "isotopes"
15,621	18	Change "isotobes" to "isotopes"
15,679	8	Change "home" to "whole"
15,687	24	Change "portect" to "protect"

Quarantelli, E.L. and Dynes, R.R., 1972, Images of Disaster
Behavior: Myths and Consequences, Ohio State University

popular images of disaster behavior. It is to this evaluation that we wish to turn next.

It is important to note at the outset, however, that the term disaster is one of those sponge words in the English language which usually covers anything which a speaker thinks to be unfortunate. As we will use it here, a disaster is an event caused by an agent, i.e., an earthquake, hurricane, flood, fire, etc., which creates extensive physical impact which affects existing social organization. Since various types of agents have differential effects, the modal case used in the subsequent discussion is to look at the actual behavior which occurs as the consequence of sudden and widespread impact in an American urban community, such as an earthquake or tornado striking a large city. What we will have to say, however, has considerable applicability to the consequences of other types of stress agents and, with adjustment for the level of development, also would roughly apply to similar situations in societies other than the United States. In research in other countries, we have always been more impressed by the similarities of disaster behavior than by the differences. In the discussion which follows, although we will at times cite specific studies, we will primarily draw on our knowledge of the research tradition as well as our own personal field experience in examining the validity of the popular images.

Typical Disaster Behavior

1. The idea that people will panic in the face of great threat or danger is very widespread. However, it is not borne out in reality. Insofar

hordes of animal-like creatures fleeing wildly and acting hysterically when they find themselves in danger, what actually happens is somewhat duller but also more reassuring than dramatic license portrays.

2. Just as the panic image of disaster behavior is generally incorrect, so is the view that disasters leave victims dazed and disoriented both at time of impact and in the recovery period. Those who experienced disasters are not immobilized by even the most catastrophic of events. They are neither devoid of initiative nor passively dependent and expectant that others, especially relief and welfare workers, will take care of them and their disaster created needs. In fact, disaster victims sometimes insist in acting on their own even contrary to the expressed advice of the public authorities and formal agencies.

A form of shock reaction, called a "disaster syndrome," has sometimes been observed in the aftermath of relatively sudden and extensive disasters. This reaction involves a state of apathy leading to a regression in normal cognitive processes. However, the "disaster syndrome" does not appear in great numbers of people; seems confined only to the most sudden traumatic kinds of disasters; has been reported only in certain cultural settings; and is generally of short duration, hours only, if not minutes. One study of an extremely extensive tornado, using an area probability sample, found that only 14 percent of all victims may have manifested some aspects of the initial stages of the syndrome.

In general, disaster victims react in an active manner, and do not wait around for assistance by outsiders or offers of aid from organizations. On

Since personal experience with disaster impact is so infrequent and difficult to arrange, the major impressions of disaster behavior come from accounts in the mass media. This is true even for those who are in the impact area and, of course, the media reports are the only initial source for those outside. The major effect of the media coverage is often only to pool other people's misconceptions and to report them. This, in large part, is due to the conditions for the coverage of news as well as to certain well established norms within the mass media industry.

In the first place, reporters also have images of what should happen and, in the absence of contrary evidence, often report these images. For example, during the massive evacuation in Hurricane Carla, a wire service story, carried as a headline in some newspapers stated that in parts of Texas "more than 100,000 persons fled in near panic." A later systematic study showed that this report was false insofar as the conditions of the evacuees was concerned. In fact, the study made of that behavior particularly commented on the extraordinarily low accident rate despite the fact that a half million people fled; involvement in traffic accidents or delays enroute because of them was reported by only .6 percent of the evacuees and no fatalities at all resulted from the massive movement of cars during the evacuation. Given the normal condition of traffic and traffic fatalities this was probably one of the most interesting aspects about this particular instance of disaster behavior. However, the mass media people who reported the story seemed to have presupposed that fleeing people are 'panicky' and reported it as such.

Hans, J.M. and Sell, T.C., 1974, Evacuation Risks - An
Evaluation, U.S. E.P.A Office of Radiation Protection

of the National Motor Vehicle Accident Death Rate to estimate the risk of death in an evacuation permits a reasonable approximation of the risk. Furthermore, there does not seem to be any activity with a risk of death, other than motor vehicle transportation, that can be more closely related.

Other justifications for basing risk estimations on the National Motor Vehicle Accident Death Rate follow:

1. Since more than 99 percent of the movement of people in an evacuation is by motor vehicle, the probability is great that accidents could occur involving vehicles.
2. Accident rates at home or work are not comparable to situations encountered away from home at motels or reception centers.
3. A state of "panic" does not exist during an evacuation which would result in reckless and high-speed driving (18). The evacuations were very orderly and vehicle traffic tends to move at relatively low speeds (35 mph is the average). Nationally, 74 percent of traffic accident fatalities occur at speeds greater than 40 mph (18). At least 50 percent of the National Motor Vehicle fatalities have been attributed to drinking (18), whereas drunk-driving has not been observed in evacuations (17). From published reports (16,20) and observations of personnel familiar with evacuation, traffic moves at a much slower rate, and cannot even be compared to commuter traffic leaving a city. The slowdown is caused both by the fact that there is more traffic on the highways and feeder routes and that more personnel are involved in traffic control.
4. The daily death rate per 100,000 persons from all accidents (0.15) is about two times higher than the daily death rate per 100,000 persons from motor vehicle accidents (0.07). All accidents include many situations such as poisoning, railroad deaths, industrial accidents, etc., which would be dissimilar to circumstances in an evacuation. The dissimilarities of conditions of death rate calculated for all accidents with evacuation conditions seem to justify using the lower motor vehicle death rate for predictions of evacuation death risk. However, with the other uncertainties that exist, a factor of two higher in the predictions would not be unreasonable.

injuries that occurred in the events investigated? Most of the questionnaires were completed by persons on a local level who were intimately involved with the particular incidents and their recall of the events was generally very good. Some documentation of the deaths and injuries associated with an evacuation has occurred. These have been reported in "Carla" involving the largest evacuation studied (500,000 persons) (16). Verbal confirmation that no injuries or deaths have resulted from evacuations in one state has been obtained (21). This can be further confirmed because no compensation claims (permissible under law) have been filed to this effect (21).

Deaths

It seems reasonable to conclude that the number of deaths is a fairly accurate number. In most of the incidents investigated, the number of evacuees was less than a few thousand. Because of the relatively small number of people involved, a few deaths would attract sufficient attention, so that the cause of death would be ascertained, recorded, and the results reported. This may not be as true in a large disaster where hundreds of people are killed. That is, in these situations, whether the person died because of something that occurred during the evacuation or for some reason initiated by the disaster probably has less certainty. However, the numbers of these types of disasters are small. Other events which were investigated during the study, although involving the evacuation of a relatively large number of people, had few or no deaths due to the disaster agent. In these situations, again, one or two deaths would stand out.

The general conclusion is that the number of deaths reported during the study is reasonably accurate. It is unrealistic to believe that the reported ten deaths could be low by a significant factor.

Injuries

Although the number of deaths reported appears to be a reasonably accurate reflection of the true number, the reported number of injuries (two) attributed to the evacuation process seems low. This conclusion is based only upon reasonable doubt and cannot be substantiated. The definition of an injury used in the study was an injury serious enough to require medical attention. Even though it is believed that the non-fatal injuries due to vehicle accidents witnessed in the study is lower than normal, it seems logical to assume that other types of injuries do occur that may not have if the people were not evacuated. This is not to imply this rate is higher or lower than normal, but the study data (two injuries) probably has a higher degree of inaccuracy than the death rate.

It is thought that the lack of credibility is not due to the numbers reported by the responders, but that there is no reporting system for injuries comparable to the registry for death. There is not a reliable, established mechanism for collecting injury statistics, unless they are traffic-connected or needed for legal liability. Consequently, unless occurring in significant number and degree, they may be overlooked.

Comparison of predicted and observed risk of injury and death

As an example of an estimation of prediction of death and injury during an evacuation, based on the application of the National Highway Statistics, Hurricane Carla was chosen. This evacuation was not included in the estimate of risk (tables 10, 11, and 13) because the number of persons involved, the average number of miles evacuated, and other details were not known with the desired accuracy. It is used here as a disaster to which a projection of the risk of death and injury might be applied for certain assumptions and compared with actual results which did occur.

Hurricane Carla (16, 22, 23) affected the states of Texas and Louisiana from September 3 to 14, 1961, and caused the largest evacuation in American History. It was estimated that between 50,000 and 80,000 persons were evacuated in Louisiana and between 300,000 and 800,000, with the most reasonable estimate of 500,000, persons were evacuated in Texas.

The Head of the Texas Department of Public Safety called it "the wettest dry run in mass evacuation in the history of America" (16). In the movement in Texas there was not a single fatality attributable to the evacuation. There was not even a reported major accident (16).

Based upon data obtained from Hurricane Carla and the recommended death and injury prediction, table 16 was derived. As observed in table 16, using the National Motor Vehicle Accident Death and Injury Rate (tables 10 and 13), more deaths and injuries were predicted than observed in one incident only--Hurricane Carla.

If the same rationale were applied to the 63 other events investigated, in all but four, the results would be approximately the same as for Hurricane Carla. The predicted values

Dynes, R.R., Quarantelli, E.L. and Kreps, G.P., A Perspective
on Disaster Planning, 1981, Ohio State University and William
and Mary College

There is, furthermore, a frequently overlooked but fundamental difference between panic and flight behavior. The two terms both refer to withdrawal from a situation; they are otherwise not equivalent. Panic behavior is where the individual flees without any consideration for others. But the vast majority of withdrawal behavior takes the form of flight behavior. Flight from a threatening situation involves playing traditional social roles including the taking care of others. Drabek in a study of sudden evacuation in the face of an immediate flood threat in the Denver metropolitan area in 1965 found that 92 percent of family members left together, confirming a hypothesis advanced some time ago by Moore in Texas hurricanes that families moved as units and remained together despite public pressure at times to do differently.³ Even in very precipitous flight, fleeing groups often make attempts to assist strangers in getting away from a seemingly immediately dangerous situation. Mutual aid rather than panicky abandonment of others is a very manifest characteristic of withdrawal behavior in the presence of danger.

Furthermore, if panic does occur in a disaster situation it is almost never on a large scale. Panic episodes tend to be extremely localized, involve very few participants, and are of very short duration. One observer who has been studying panic behavior for the last twenty years suggests that he would be hard pressed (outside of a military context) to cite more than a small handful of clear-cut instances of panic behavior where more than three or four dozen people were involved at the most. The often cited example of the "panicky" reaction to the famous Invasion from Mars broadcast, upon close examination, shows there was extremely little behavior leading to the cessation of traditional role playing or much flight behavior for that matter. In fact, one survey study of the event reported that 84 percent of the audience was in no way even disturbed by the broadcast.⁴ Many supposed instances of "mass panic" upon serious examination turn out to be crisis situations where some people were frightened or concerned but whose behavior took forms other than unruly flight or disorganized activity.

Even in those rare situations where panic on a small scale does occur, the majority of persons involved in such situations seldom engage in panic behavior. Even in such historically famous cases as the Cocoanut Grove night club fire, the available evidence fairly clearly suggests that panic was not the modal form of withdrawal even in that highly circumscribed emergency situation; actually many persons died from asphyxiation before they could realize there was danger. The majority that escaped generally sought out alternate escape routes in a reasonable fashion with friends. Here as well as in other similar situations there was none of the widespread contagion that a panicky reaction is supposed to evoke automatically among those exposed to it. There was of course some panic behavior in this situation as well as other famous cases such as the Iroquois Theater fire. But it requires a very unusual set of circumstances involving perceptions of probable personal entrapment within a limited spatial area, possible closing of escape routes, an extremely sudden and very direct threat to life, as well as abandonment of self by others in the immediate vicinity to have the possibility of panic behavior. These are a combination of circumstances that on the whole are usually not present in any degree from most disaster situations.

Sometimes the term panic is also applied to extremely disorganized personal behavior, where the individual almost literally collapses in an hysterical

breakdown. This phenomenon so rarely occurs in disaster situations that it is not a practical problem. Of the many possible ways of responding to signs of danger, this is an extremely unlikely probability for any given individual and it is only a highly remote theoretical and statistical possibility if reference is to any large group or aggregation of persons so reacting in a crisis. When people see signs or receive warnings of danger, they generally assess the credibility of the information and the likelihood of danger to themselves and others. If the cues they receive are viewed as credible, alternative courses of action are considered. An old pre-Mao Chinese proverb notes the rational, adaptive nature of one alternative possibility: "Of the thirty-six ways to escape danger, running away is best." Accordingly in some cases endangered persons will see withdrawal from the danger as the most intelligent step possible in the given situation. They will then move out of the situation taking others with them. While this is not as dramatic a picture as one frequently drawn by fiction writers of hordes of animal-like creatures fleeing wildly and acting hysterically when they find themselves in danger, what actually happens is somewhat duller but also more reassuring.

2. Just as the panic image of disaster behavior is generally incorrect, so is the view that disasters leave victims dazed and disoriented both at time of impact and in the recovery period. Those who experienced disasters are not immobilized by even the most catastrophic of events. They are neither devoid of initiative nor passively dependent and expectant that others, especially relief and welfare workers, will take care of them and their disaster-created needs. In fact, disaster victims sometimes insist in acting on their own even contrary to the expressed advice of the public authorities and formal agencies.

A form of shock reaction, called a "disaster syndrome," has sometimes been observed in the aftermath of relatively sudden and extensive disasters. This reaction involves an apathetic response and some disorientation in thinking. However, the "disaster syndrome" does not appear in great numbers of people; seems confined only to the most sudden traumatic kinds of disasters; has been reported only in certain cultural settings; and is generally of short duration, hours only, if not minutes. One study of an extremely extensive tornado, using an area probability sample, found that only 14 percent of all victims may have manifested some aspects of the initial stages of the syndrome.⁵

In general, disaster victims react in an active manner, and do not wait around for assistance by outsiders or offers of aid from organizations. On a large scale they show considerable personal initiative and a pattern of self and informal mutual help. When shelter is needed for example, displaced persons seek the aid of and move in with other family members, intimates and neighbors. When about 10,000 were made homeless in a tornado in Massachusetts, less than 5 percent sought aid from and were housed by the public authorities.⁶ In the massive evacuation preceding Hurricane Carla mentioned before, more than three-quarters of the evacuees went to other than public shelters; 58 percent in fact went to private homes of friends and relatives.⁷ In a California flood, only 9,260 persons out of over 50,000 evacuees registered in the 38 Red Cross shelters available in 13 towns in the disaster area.⁸

This pattern of mutual and self help also prevails in other disaster-related activities besides that of obtaining shelter. In one community emergency after

clearly was no evidence of high incidents of serious emotional disorders either in children or adults which could be associated with the disaster.¹² The victims were able to function well in their recovery efforts. Another study showed that in the months following Hurricane Carla, there was not only a drop in neurological and psychiatric classifications in both out-patient as well as in-patient clinics in the impacted areas, but also a diminution of symptoms among neurotic and psychotic patients.¹³ In other words, disasters not only fail to evoke paralyzing emotional reactions among previously healthy persons, but they do not even make previously mentally ill or disturbed persons any worse.

These kinds of observations parallel what has been observed also in wartime situations, either among civilians or the military. Even under very severe stress, people do not become either totally irresponsible and dependent, or completely impotent and immobilized. Rather they attempt to solve in an active fashion, especially in conjunction with others, both their short-run and long-run problems in those ways which seem reasonable to them as they perceive the crisis situation. In general, the same can be said of the vast majority of disaster victims as generally has been said of combat soldiers by Gringer and Spiegel: "Under the most harrowing circumstances, they are able to control fear or anxiety, to think clearly and to make appropriate decisions with rapidity."¹⁴

3. The assumption that local organizations are unable to cope with disasters is based both on the notion that these organizations and the communities in which they are located are overwhelmed by disaster impact, and also by the fear that the employees of these organizations are so affected by disaster impact that their efficiency is reduced. Neither of these notions stands up well under close observation.

The notion of communities being overwhelmed is usually derived from over-estimating the amount of disaster-occasioned demand on facilities and under-estimating the number of resources still available after impact. In all disasters in recent years in the United States, the amount of destruction in relation to total resources is quite low; the same is true with regard to the ratio of casualties to the total population base involved.

For example, Anchorage, the largest city in Alaska, had about 50,000 persons with an additional 50,000 in the surrounding areas, including a large number of military personnel. The metropolitan area did experience extensive property damage in the 1964 Alaskan earthquake, but only one hospital eventually had to be evacuated. The earthquake occurred at 5:36 on a Friday evening. Practically all of the victims of the impact were found and removed before dark on the first night. There were five hospitals in Anchorage, two of them private, and nearly all of the casualties were brought to one hospital. Of its 155 beds, only 75 were occupied at the time of the earthquake. From the time that the first casualty arrived at 6:15 p.m. until midnight, 21 casualties were received; three were dead, seven were admitted and the rest sent home. In the next two days, this hospital handled 89 emergencies; of these 18 were clearly earthquake victims while the rest were "normal" emergencies and persons injured while working with debris. At no time did inpatient census exceed 123 during the emergency. While the death rate in the Anchorage area as a result of the earthquake was finally determined to be seven, this is a much lower figure than initial reports suggested and that most persons remember. (In the entire state, the overall figure was close to 100.)

CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station, Unit 1)
(Emergency Planning Proceeding)
Docket No. 50-322-OL-3

COLLECTED
JAN 10 1985

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I certify that copies of LILCO's PROPOSED CORRECTIONS TO TRANSCRIPT were served this date upon the following by first-class mail, postage prepaid, or (as indicated by an asterisk) by Federal Express.

James A. Laurenson,
Chairman*
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
East-West Tower, Rm. 402A
4350 East-West Hwy.
Bethesda, MD 20814

Secretary of the Commission
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Atomic Safety and Licensing
Appeal Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Dr. Jerry R. Kline*
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
East-West Tower, Rm. 427
4350 East-West Hwy.
Bethesda, MD 20814

Atomic Safety and Licensing
Board Panel
U.S. Nuclear Regulatory
Commission
Washington, D.C. 20555

Mr. Frederick J. Shon*
Atomic Safety and Licensing
Board
U.S. Nuclear Regulatory
Commission
East-West Tower, Rm. 430
4350 East-West Hwy.
Bethesda, MD 20814

Bernard M. Bordenick, Esq.*
Oreste Russ Pirfo, Esq.
Edwin J. Reis, Esq.
U. S. Nuclear Regulatory
Commission
7735 Old Georgetown Road
(to mailroom)
Bethesda, MD 20814

Donna Duer, Esq.*
Law Clerk
Atomic Safety and Licensing
Board Panel
U. S. Nuclear Regulatory
Commission
East-West Tower, North Tower
4350 East-West Highway
Bethesda, MD 20814

Stewart M. Glass, Esq.*
Regional Counsel
Federal Emergency Management
Agency
26 Federal Plaza, Room 1349
New York, New York 10278

Stephen B. Latham, Esq.*
John F. Shea, Esq.
Twomey, Latham & Shea
33 West Second Street
P.O. Box 398
Riverhead, NY 11901

Fabian G. Palomino, Esq.*
Special Counsel to the
Governor
Executive Chamber
Room 229
State Capitol
Albany, New York 12224

Herbert H. Brown, Esq.*
Lawrence Coe Lanpher, Esq.
Christopher M. McMurray, Esq.
Kirkpatrick, Lockhart, Hill
Christopher & Phillips
8th Floor
1900 M Street, N.W.
Washington, D.C. 20036

MHB Technical Associates
1723 Hamilton Avenue
Suite K
San Jose, California 95125

Mr. Jay Dunkelberger
New York State Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

Gerald C. Crotty, Esq.
Counsel to the Governor
Executive Chamber
State Capitol
Albany, New York 12224

Ralph Shapiro, Esq.*
Cammer & Shapiro, P.C.
9 East 40th Street
New York, New York 10016

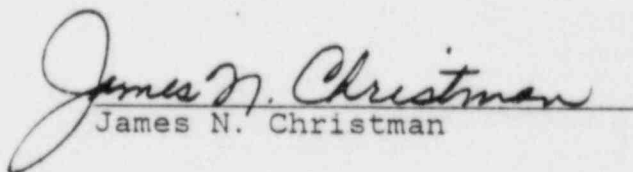
James B. Dougherty, Esq.*
3045 Porter Street
Washington, D.C. 20008

Jonathan D. Feinberg, Esq.
New York State Public Service
Commission, Staff Counsel
3 Rockefeller Plaza
Albany, New York 12223

Spence W. Perry, Esq.
Associate General Counsel
Federal Emergency Management
Agency
500 C Street, S.W., Rm. 840
Washington, D.C. 20472

Ms. Nora Bredes
Executive Coordinator
Shoreham Opponents' Coalition
195 East Main Street
Smithtown, New York 11787

Martin Bradley Ashare, Esq.
Suffolk County Attorney
H. Lee Dennison Building
Veterans Memorial Highway
Hauppauge, New York 11788


James N. Christman

Hunton & Williams
707 East Main Street
Post Office Box 1535
Richmond, Virginia 23212

DATED: October 12, 1984