

INDEX

- Actionable risk
 communication model,
 272
- Active participant, 64, 76–78
- Activity theory, 186, 190,
 198–199
- Acute phase of severe crisis,
 88
- Ad hoc publics, 232
- Alkoven voluntary fire
 brigade, 237
- Anger (emotions), 44, 210,
 217
- Austria
 social media use in, 159
 2013 Floods in, 157–159
- Austrian Central Institute for
 Meteorology and
 Geodynamics
 (ZAMG), 158, 165
- Austrian Press Agency (APA),
 162, 165
- Authorities, 167
 health, 262
 Norwegian and UK,
 265–266
 public, 164
- Autonomic nervous system,
 208
- BBC, 7, 139, 141, 144–147,
 149, 150
- BBC News, 142, 144, 151,
 266, 267
- Bieber, Justin, 27–28
- Biometric data, 194, 196
- ‘Blodbank’, 76
- Blood bank communication,
 76–77
- Boolean expression
 combining operators,
 22
- Breaking news and prayers,
 26–27
- Central European floods
 (2013), 157, 159,
 160–161
- Central nervous system,
 208–210
- Citizens, affected, 166–167
- Civil protection laws and
 regulations, 157
- Civil Protection Server, 167
- Close-to-working prototype,
 197, 214
 second usability test,
 216–218
- Closed Facebook Group,
 51–52
- Cognitive mental models, 5
- Cognitive processes,
 209–210
- ‘Comment and date’, 48

- Commissives, 265, 271
- Communication (*see also*
 Crisis communication;
 Online communication
 reconstruction)
 channels, 258
 models and social media,
 233–234
 official, 158, 231, 239
 online, 156, 163, 164
 patterns, 234–235
 strategies, 231
- Communicators
 crisis, 231
 findings from interviews
 with, 286–287
 official, 172
- Community resilience, 4
- Complex contagion
 dynamics, 24
- Computational thinking, 188,
 198
- Computer-assisted qualitative
 content analysis, 164
- “Configuring awareness”,
 280
- Constatives, 265, 271
- Content evaluation, 198
- Content strategy inspired
 recommendations, 242
 audience, 245–246
 develop and implement
 content strategy,
 242–244
 stakeholders and users,
 and needs, 244–245
- Content Strategy Quad by
 Brain Traffic, 243
- Crisis, 3–4, 136
 journalism, 117
 management, 186
 news events, 115, 117
 phase, 166, 236–238
 public to networked crisis
 publics, 234
 Twitter and situation
 awareness of crisis
 events, 17–19
- Crisis communication, 17,
 65–67, 87, 88, 159,
 206
 managers, 286
 official, 161
 SA and social media in,
 279–280
 social media impact on,
 174–175
 strategies, 230
 theories, 89
 tools, 258
- Crisis communicators,
 89–90, 230,
 232–233, 258
 developing tool for, 8
- Dagsavisen* (Regional
 newspaper), 281
- Daily Mail*, 141, 144
- Democratic values, 47
- Department of Health (DoH),
 260
- Der Standard*, 171
- Digital journalism, 114
- Digital media, affordances of,
 7, 114, 116–118
- Digital technology, 116–117
- Directives, 265, 271, 272
- Disaster stages, 161
- Discussion forums, 19
- Disease outbreaks, 256
- Domestic terror event, 115
- Dual testimony, 46
- Dynamic communication,
 233

- Earthquakes, 230
- Ebola outbreak, 137, 139, 141
- Electrodermal activity (EDA), 209
- Emergency, 3
 - information gathering tool, 187–188
 - management
 - organisations, 186
 - usability testing and, 189–191
- Emotion(al)
 - detectors, 210
 - perception, 210
 - process, 120–121
 - reaction stems, 214
- Environmental disasters, 157, 165, 230
 - communication models and social media, 233–234
 - content strategy inspired recommendations, 242–246
 - crisis phase, 237
 - crisis public to networked crisis publics, 234
 - hydrographical
 - perspective, 235
 - plan ahead and
 - communicate proactively, 241–242
 - pre-crisis phase, 236–237
 - public communication, 238
 - recommendations and models, 240
 - recommendations for rescue organisations, 241
 - research design, 234–235
 - social media and
 - networked publics, 231–233
 - theoretical backdrop, 231
 - voluntary fire brigade's
 - online and social media communication, 237–238
 - web and social media
 - literacy oriented recommendations, 246–247
- Events, 188, 211
 - awareness concerning effects, 123–125
 - crisis news, 126–127
 - domestic terror, 115–116
 - event in Norway, 119–121
 - long-wave, 136, 137, 140, 256, 259
 - short-wave, 136
 - terrorist, 136
 - 'Every crisis is unique', 100–101
- Expressives, 265, 271
- Eye movements, 216
- Eye-tracking, 196, 209–210
- Facebook, 73, 117, 118, 122, 161, 166, 168, 169, 171–173, 194, 232, 235, 238, 239, 286, 288
 - and date, 48
 - discourse, 47
 - feeds, 189
- Facial expressions, 210, 215–217
- Facial responses, 196
- First responder's experiences, 101–102

- Floods, 136, 230
 flood-related
 communication, 163, 230
 flood-related
 conversations, 231
 pre-crisis phase of, 158
- Format, 118
- Frustration, 217
- Functioning high-fidelity prototype, 188
- Future crises, daily routines and challenges for, 97–98
- Future Global Shocks*, 65
- Gatekeeping, 121
- ‘Global health’, 137
- Google, 129, 271
- Governmental agencies, 206, 259–260
- Grief, 27, 44, 46, 47, 50, 52–53
 private and public, 54
- The Guardian*, 141, 142–144, 145–146, 148–149
- The Guardian and MailOnline*, 267
- Hard news, 114
- Hashtags (*see also* Twitter), 283, 288
 #ff hashtags, 28
 #Oslo hashtag, 27, 28, 283
 #osloexpl, 283
 #oslove, 28
 #prayfor (...) hashtag, 27
 #prayfornorway hashtag, 33, 283
 relevance of, 19–21, 24–26
- #showyourhearts, 28
- #Utøya, 283
- Health authorities, 262
- Health sector (*see also* Police sector), 98
 ‘every crisis is unique’, 100–101
 first responder’s
 experiences, 101–102
 hospital staff experiences
 with Twitter, 99–100
- High income countries (HICs), 256
- ‘High Tide 2013’, 166
- Hospital staff experiences
 with Twitter, 99–100
- Human-computer interaction (HCI), 207–208
- Hydrography Services, 158, 165–166
- In-depth interviews, 47–48
- Individual resilience, 4
- Information flows, 162, 165, 166
 institutional actors, 167–170
 journalists, 171–173
 social media
 communication
 processes and, 167
- Information handling tools, 188
- Information officers, findings from interviews with, 286–287
- Instagram, 188
- Institutional actors, 164, 167–170, 241
 social media impact on, 174
- Inter alia, 158

- Interdisciplinary cooperation, 124
- Internet, 65, 232
 - crisis, 238
- Journalism-as-institution, 115
- Journalism-as-work, 115
- Journalists, 115, 129, 130n3, 156, 165, 171–173, 196
 - findings from interviews with, 286–287
- Joy (emotions), 210
- Laboratory studies, 208
- Laboratory testing of usability, 207–208
- Live streaming video applications, 160
- Live tickers, 171, 174
- Long-wave events, 136, 137, 140, 256, 259
- Macro-economic consequences, 256
- MailOnline*, 141, 142, 144, 146
- Main crisis phase, 158
- Many-to-many process, 280
- Media (*see also* Social media)
 - logic, 117–118, 130n1
 - mass, 163, 206
 - niche, 163
 - traditional, 156, 231
- Medical evaluation of William Pooley, 145–147
- Mental models, 5, 190, 198
- Meteorological forecast system, 168
- Micro-blogging services, 18
- Ministry of Health and Care Service, 86
- Ministry of Justice, 86, 89
- Mobile apps, 161
- Monitoring challenges, 96–97
- Narrative therapy (NT), 46
- National sentiment, 47
- Natural disasters, 160
- Networked crisis publics, crisis public to, 234
- Networked publics, 231–233, 242
- News
 - agencies, 86
 - BBC News, 142, 144, 151, 266, 267
 - online, 118
 - services, 162
- News workers reflections on digital journalism
 - awareness concerning effects of event, 123–125
 - biggest event in Norway, 119–121
 - crisis news events, 126–127
 - culture of collaboration, 125–126
 - domestic terror event, 115–116
 - journalists transfer, 114–115
 - methodology, 118–119
 - occupational and organisational approaches, 121–123
 - online newspaper, 128–129
 - social media logic, 117–118
 - technological affordances, 116–118, 127–128

- Niche media, 163
- Non-governmental organisations (NGOs), 186
- Norway attacks (*see also* Utøya terror attack)
- active participant, 76–78
 - blood and security during, 64
 - findings, 69–78
 - methodology, 68–69
 - Norwegian Authorities on Twitter 22 July, 69–71
 - Oslo University Hospital, 72–74
 - passive observer, 74–76
 - situation awareness, social media and crisis communication, 65–67
 - Social Media Strategy of PST, 72–76
 - 22 July events, 67–68
- Norwegian and UK authorities, 265–266
- Norwegian Directorate of Health (NDH), 86, 99, 259
- Norwegian Institute for Public Health (NIPH), 259
- Norwegian Police Security Services (PST), 64, 69
- Norwegian Twitter-community, 284
- Norwegian Twitter-sphere, 16, 68, 280
- breaking news and prayers, 26–27
 - event, 21
 - findings, 23–35, 283–284
 - hashtags on Twitter, 25
 - Love and Justin Bieber, 27–28
 - method, 22–23
 - proportion of tweets with hashtags, 26
 - relevance of hashtags, 19–21, 24–26
 - retweeted accounts, 33
 - superposters, 28–31
 - Twitter and situation awareness of crisis events, 17–19
 - Twitter users, 31–33
- NRK *Dagsrevyen* (TV news programme), 100
- NRK *Supernytt* (Youth channel), 73
- Oberösterreichische Nachrichten*, 163, 171
- Occupational approaches to technological affordances, 121–123
- Occupational professionalism, 120
- ‘On-going event’ view, 189, 196
- Online communication, 156, 163, 164
- data analysis, 162–163
 - news, 118
- Online communication reconstruction, 164
- affected citizens and organisations, new actors and others, 166–167
 - crisis communication, social media impact on, 174–175

- 2013 Floods in Austria, 157–159
- institutional actors,
 - journalists and remote experts, 164–166
- institutional actors, social media impact on, 174
- media, social media impact on, 174
- online data analysis, 162–163
- related work, 160–162
- social media, 156–157, 159, 167–173
- stakeholder interviews, 163–164
- study design, 162
- theoretical background, 159–160
- Organisational approaches to technological affordances, 121–123
- Organisational professionalism, 116
- Oslo bomb, 16
- Oslo police district (OPD), 93
- Oslo University Hospital (OUH), 33, 72–74, 76–78, 99
- Oslo-centred hashtags, 27
- Pandemic threats, 257, 271
- Paracrisis, 160
- Passive observer, 74–76
- Pauline Cafferkey, diagnosis of, 147–149
- Periscope, 160
- Personal relevance, 232
- Police directorate (POD), 92
- Police sector (*see also* Health sector), 92
 - awakening to importance of social media, 93–94
 - daily routines and challenges for future crises, 97–98
 - interactivity and dialogue in terror crises, 94–96
 - monitoring challenges, 96–97
- Post-crisis phase, 158–159
- Pre-crisis phase, 166, 235–237
 - of floods, 158
- Pre-design mapping, 195
- Pre-production mapping, 199
- Private grief, 54
- Proactive communication strategy, 241–242
- Professionalism, 115, 116, 121
 - occupational, 120
 - organisational, 116
- @PSTnorge, 71, 74
- Psychophysiological measurements
 - psychophysiological data, 218
 - psychophysiological testing, 211
 - for stress detection, 208–209
 - use in usability prototype testing, 218–220
- Public authorities, 164
- Public grief, 54
- Public Health Emergency of International Concern (PHEIC), 138, 259
 - WHO's declaration, 142–145
- Public Health England (PHE), 260

- Quality broadsheets, 141
- Queensland Police role in
Twitter, 66
- Red Cross, 169–170
- Regional Office for Africa
(AFRO), 141
- Remote experts, 165
- Rescue organisations,
recommendations for,
241
- Researching Social Media
and Collaborative
Software Use in
Emergency Situations
project (RESCUE
project), 1–2, 186,
188, 207, 282, 286
tool, 186–187, 188–189,
199–200
- Resilience, 4, 44, 46
- Retweeted accounts, 33
- Ringerike Hospital, 100
- Risk, 4, 8–9, 66, 109, 137,
256, 258, 265
for crisis management and
communication, 98
public health, 138
- Sadness (emotions), 210
- SC, 209, 215–216
- “Selfinitiated and mediated
resilience governance”,
67
- Semi-structured interviews, 90
- Short-wave events, 136
- Situation awareness (SA), 4,
17–19, 65–67, 207,
278
in crisis communication,
279–280
of crisis events, 17–19
- Situational crisis
communication
theory, 89, 159, 160,
241
- Snapchat, 73, 286
- Social democratic party, 21
- Social media, 1, 16, 65–67,
117, 122, 126, 136,
137, 140, 162, 163,
167, 206, 230, 259,
273
analysis, 92
awakening to importance,
93–94
communication models
and, 233–234
connectivity element, 3
in crisis communication,
279–280
in crisis situations, 160
escalation, 291
health sector, 98–102
impact on crisis
communication,
174–175
impact on institutional
actors, 174
impact on media, 174
interview subjects and
responsibilities, 91
literacy oriented
recommendations,
246–247
logic, 117–118
in management of terror
crisis in Norway, 86
methodological approach,
90–92
and narrative of trauma,
45–47
need for coordination,
102–103

- and networked publics, 231–233
- perspectives from research, 89–90
- platforms, 2, 156, 171, 211
- police sector, 92–98
- recommendations for
 - social media use, 8–9
 - in risks and crises, 5–8
 - use in Austria, 159
- Social media communication, 162, 237–238, 243
 - action-able risk communication model, 272
 - constative and directive speech acts, 265
 - health authorities strategies, 262
 - and information flows, 167
 - institutional actors, 167–170
 - journalists, 171–173
 - likes/re-tweets/comments, 266–267
 - Norwegian and UK health authorities' strategies, 263–264
 - recommendations for health authorities use of social media, 269–270
 - research design, 259–262
 - social medium, 273
 - strategy documents and interview sources, 271
 - theoretical perspectives, 257–259
 - Twitter, 267
- Social media information
 - gathering tool development activity theory, 198–199
 - building conceptual model, 191–193
 - emergency information gathering tool, 187–188
 - laboratory tests, 199–200
 - RESCUE tool, 186–187, 188–189
 - testing detailed tool design, 195–198
 - testing tool, 193–195, 211–213
 - testing usability, 191
 - usability testing and emergencies, 189–191
- Social Media Strategy of PST, 72–76
- Social media-reflexivity, 140, 261
- Social networks, 161, 230
- Social shaping, 117
- Socio-technological foundations, 232
- Solidarity, 47
- Sorrow, 27, 44, 57
- 'Split networks', 234
- SQL database, 22
- Stakeholders, 162, 167, 234–235, 244–245
 - interviews, 163–164
 - management approach, 160
 - typology, 163
- Standard operating procedure (SOP), 289
- Stress detection,
 - psychophysiological measurements for, 208–209

- 'Structured focused'
 - methodology, 141
- Subjective data, 195–196
- Subsidiarity principle, 158
- Superposters, 19, 28–31
- 'Swine flu' crisis, 266
- Sympathetic nervous system, 209

- Task performance tests, 207–208
- 'Team Austria', 170
- Technological affordances, 118, 128
 - occupational and organisational approaches to, 121–123
 - in time of digital media, 116–118
- Technological artefact, 118
- Terror crises, interactivity and dialogue in, 94–96
- Terror-event journalism, 117
- Terrorist attacks, 16, 30, 32, 34, 67–68, 119, 125, 278, 279
 - case and data, 281–282
 - findings from analysis of Norwegian Twitter-sphere, 283–284
 - findings from interviews with journalists, information officers and key communicators, 286–287
 - findings from interviews with survivors from Utøya, 285–286
 - key findings, 283
 - recommendations, 287–292
 - situation awareness and social media in crisis communication, 279–280
- Terrorist event, 136
- Testing usability of social media information gathering tool, 191
- Togetherness, 52–53
- Traditional actors, 166
- Traditional crisis communicators, 156, 161
- Traditional journalism, 117
- Traditional media, 156, 231
- Transport services, 167
- Trauma, 45–47
- Tsunamis, 290
- Tweets or Instagram images, 211
- 22 July Commission, 67–68, 74, 86, 98, 281
- Twitter, 17, 18, 73, 121–122, 161, 163, 166, 171, 256, 267, 287, 288
 - communication analysis, 16
 - of crisis events, 17–19
 - and diagnosis of Pauline Cafferkey, 147–149
 - and medical evacuation of William Pooley, 145–147
 - research design and methods, 139–141
 - and social media, 136–137
 - users, 31–33

- and West African Ebola outbreak, 137–139, 141–142
 - WHO’s declaration of PHEIC, 142–145
- UBIMET (meteorological forecast system), 168
- UN Mission for Emergency Ebola Relief (UNMEER), 139
- Unfolding emergencies, 188
- Unity, 44
- US Centers for Disease Control and Prevention (CDC), 138, 139
- Usability testing, 5, 186, 198, 199, 207, 213–218
 - and emergencies, 189–191
 - laboratory testing, 207–208
 - prototype testing, 218–220
 - of social media
 - information gathering tool, 191
- User-friendliness
 - close-to-working prototype, 214–218
 - discussion and recommendations, 218
- EDA, 209
- eye tracking, 209–210
- facial expressions, 210
- laboratory testing of usability, 207–208
- psychophysiological measurements for stress detection, 208–209
- test methods, 206–207
- testing tool for social media information gathering, 211–213
- use of psychophysiological measurements, 218–220
- wireframe prototype, 213–214
- Utøya terror attack (*see also* Norway attacks), 44, 49, 55–56
 - background, 44–45
 - closed Facebook group, 51–52
 - findings from interviews with survivors from, 285–286
 - grief and togetherness, 52–53
 - hate and evil, 55
 - inconceivable, 50–51
 - methodology and data, 47–48
 - missing youth, 51
 - private and public grief, 54
 - saved, 49–50
 - social media and narrative of trauma, 45–47
- Variability of raw materials, 121
- Verdens Gang* (Tabloid newspaper), 94
- VG, 54, 117, 125, 129
 - digital platforms, 119
 - interdisciplinary cooperation, 124
- VG Live 24-hours News, 94
- VG *Nett* (Online newspaper), 73, 119
- Virtual interpersonal communication, 48

- Voluntary fire brigade, 174, 235, 239
 - local, 234
 - online and social media communication, 237–238
- Voluntary initiatives, 167
- Warning and alarm system, 158
- Weather information, 158
- Weather warnings, 158
- Web 2.0 technologies, 65
- Web and social media communication processes, 243
- literacy oriented recommendations, 246–247
- West African Ebola outbreak, 137–139
- Wireframe prototype, 213–214
- World Health Organisation (WHO), 137, 138, 259
 - announces outbreak of Ebola virus disease, 141
 - declaration of PHEIC, 142–145
- YouTube, 31, 171, 238