

Making Weather Connections: From Science to Common Sense and Public Lethargy to Activism



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Making Weather Connections: From Science to Common Sense and Public Lethargy to Activism



Brief comments to provide contexts and caveats for CMOS slides

Cover. Regarding ‘connections’, the implicit learning triangle relationship to bear in mind is that of Awareness-Understanding-Persuasion. In a rational world the Awareness-Understanding-Persuasion process represents informed, logic-based change, and is part-and-parcel of this presentation.

1 Abstract. Science is a high-sounding term, and has considerable cachet, but common sense “appeals to the masses”, which suggests that a connection could serve the interests of both groups. However, it is useful to bear in mind H. L. Mencken’s opinion regarding ‘the great masses’.

2-8 The concept of “The Doomsday Map” took root as near as I can recall in the early 1970s while I was working on an environmental assessment project at the University of Kansas, took shape in the late 1970s while at the Ministry of State for Urban Affairs, and became formalized in my mind in the 1980s while at the University of Ottawa. High profile opportunities to present the Doomsday Map included keynote and plenary addresses at the 1990 GIS/LIS Conference in Anaheim, California, and the 1992 Annual Conference of the Urban and Regional Information Systems Association (URISA) in Washington, DC. The Doomsday Map was also presented at a number of other conferences and at university seminars in the late 1980s and early 1990s.

The source of the map layers were newspaper stories, a small portion of which are represented by headlines presented in slides 3-9. These articles made the point (to me, at least) about how many different things and places were (apparently) in deep trouble, and how so little mitigation was (apparently) occurring, and seemed to me to be a very useful and informative source of materials that could be mapped to illustrate things and places that had gone or were going wrong.

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Brief comments to provide contexts and caveats for CMOS slides

2-8 continued...

There are two closing notes to these slides. First, the theme of the 1992 URISA conference was “Making Connections”, so no claim for originality is made here. Second, for those of you who think that the current discourse on the federal role in the global warming brouhaha is new in any way, shape or form, read the article behind the newspaper headline “The mouse that squeaked” in slide 5. This piece was written by Anne McIlroy and published in the Ottawa Citizen on May 12, 1990, page B6. Two lines from the article are repeated in respect of their powerful shelf life. The sub-heading “Signs indicate gov’t backpedaling on commitment to fight global warming” could be written today without fear of contradiction. And, the declaration, “We must define the policy for this country to fight this terrible enemy, this subversive enemy, head enemy, silent enemy which is destroying the planet now” was from a speech by the federal Environment Minister in 1989. It appears to be directly usable, as is, in 2007.

- 9 What were we going to do about things gone and going wrong 15 or more years ago? Wring our hands, exhort, and plan appeared to have been the preferred options.
- 10 When I went public with the idea of a headline-based Doomsday Map, I had assembled at least 5000 stories. I suspect that while I had obtained only a miniscule portion of the pertinent articles, it is highly probable that many provincial and federal agencies, and likely corporations, had newspaper files that dwarfed mine by comparison. I further suspect that some of them had Doomsday Map thoughts similar to mine, but I do not recall seeing them in publications.

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11-13 Fifteen years later, is it appropriate to ask, *Plus ça change, plus c'est pareil?*

14 The point taken is that newspapers are still a good medium to get a handle on what the public is being offered in the way of news, and what the public has to say/write on matters of public interest.

15-17 This is a very small selection of related articles casually collected in 2006 and 2007, and as a result of this assignment I have already casually assembled several hundred articles for 2007.

18 Do meteorologists have a lament? Do oceanographers have a lament? If so, and we can put them together, we might have quite the common sense message that most Canadians would understand, and maybe even adopt as a call to action.

19 When all is said and done, geographers are engaged in a noble and important task; however, it is far from complete, and I can find you hundreds of media items on a daily basis that confirm that spatial awareness is very much a work in progress throughout our society. A similar statement on meteorology and oceanography would no doubt assist in building connections.

20 In summary form, this is how geography produces its messages, and how the field relates to the public, that is, through the media. I believe that meteorology and oceanography can be characterized by similar, science-oriented graphics, and that it would be most instructive to consider how these representations could contribute to building connections between our disciplines, and reaching out to the public.

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- 21** These 150 terms represent the language of much of geography and GIS. Do meteorology and oceanography have similar lists? Connecting on the language of our disciplines is a key step in making the science-common sense connection across the disciplines.
- 22** I presented these terms at a conference some months ago as my current Top 10 considerations when it comes to designing and evaluating curiosity-driven and client-driven geographic research and application projects. Are there similar lists among meteorologists and oceanographers? Can we construct a connected, Top 25 list of key terms?
- 23** This graphic has been around for at least three decades, and roughly illustrates the connection that scientific inquiry provides in linking existing reality and preferred reality. The common sense approach, while highly appealing in many respects, is a whole different order of business, and is not renowned for either its deep thought or its deep thinkers. That said, the limits of science in making connections between the weather and citizens, and the seeming inability of science to transform lethargy into action on matters related to the weather and climate, suggests that perhaps geographers, meteorologists and oceanographers should join in common cause and search for a new, more publicly appealing way of bridging the gap(s) between existing reality and preferred reality.
- 24-25** Geography Awareness Week (GAW) and Geographic Information Systems (GIS) Day are an opportunity for geographers to better participate in Canada's Awareness-Understanding-Persuasion process. These website addresses provide access to what was achieved in 2006. It is my expectation that in 2007 we will move far beyond what was done in 2006, and it would be excellent to have CMOS and its members contribute to that effort.

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Brief comments to provide contexts and caveats for CMOS slides

26 To my knowledge this question has not been asked in public before. If it has, and it has been answered, then much of our work is done, and we can post the answer on the CAG website. If that is not the case, then we and our colleagues need to talk about how CMOS can contribute to GAW and GIS Day 2007, and how geographers and the CAG can reciprocate.

27 To my knowledge this question has not been asked in public before. If it has, and it has been answered, then much of our work is done, and we can post the answer on the CAG website. If that is not the case, then the members of CMOS and the CAG need to talk about how we can better use our collective data, information, and knowledge to close the gap(s) between the existing weather and climate and the preferred weather and climate.

I hasten to add that an advocate's role is clearly very different from a scientist's role, and that this difference may be very difficult for some CMOS members and CAG members to embrace. Fortunately, there are likely other groups with whom CMOS and the CAG could partner if we agree that we want to be part of the action. And that too is a topic worthy of attention should we agree that we want to connect science and common sense about the weather and the climate, and turn public lethargy into public and political activism regarding our climate.

28 I am pleased to acknowledge the Canadian Association of Geographers and the Laboratory for Applied Geomatics and Geographic Information System Science, University of Ottawa, for support and assistance in preparing this presentation.

Making Weather Connections: From Science to Common Sense and Public Lethargy to Activism

Abstract

Weather-related issues are of increasing public interest but much more effort is needed to close the gap between the perception of weather as science and of weather as common sense. In 2006 the Canadian Association of Geographers played a lead role in international Geography Awareness Week (GAW) and Geographic Information Systems (GIS) Day. A key theme for 2007 is to demonstrate to Canadians throughout the country how geography affects the formation of weather systems; how weather systems are affected by geography; and how geography and weather systems combine to affect transportation systems, emergency services, water quality, energy supplies and consumption, public safety, garbage disposal, economic activity - even the quality of air that we breathe.

This presentation will briefly explore how meteorologists and oceanographers can join forces with geographers to turn aspects of our sciences into common sense concepts, and thereby accelerate the process of converting public lethargy about the weather and our shared climate, into public and political activism.

Slide #1

Geography, Meteorology and Oceanography:
Making Connections



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Images from the Doomsday Map Project: Connecting Geography, Meteorology and Oceanography



Makings of 'The Doomsday Map'?

- Overexploitation risks survival of planet?
- Rainforests: Their destruction a worldwide problem
- Oil's black death takes terrible toll
- Coastal waters being used as toxic dump

Slide #2

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Making Connections



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Makings of 'The Doomsday Map'?

- 100,000 eastern lakes hurt by acid rain
- Cocktail of toxins threatens lake
- More PCB-laced oil spills in river feared
- It's not cool to kill the ozone
- A warning on warming

Slide #3

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Makings of 'The Doomsday Map'?

- 1989 one of the hottest years
- The mouse that squeaked
- Here's a crash course on the Greenhouse effect
- Greenhouse effect starts to make Washington sweat
- British cities could drown
- US drought becoming a threat to our water

Slide #4

Geography, Meteorology and Oceanography:
Making Connections



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Makings of 'The Doomsday Map'?

- Dirty air threatens one billion
- Metro choking on auto fumes hearings warned
- Mexico City pollution now 'irreversible'
- Air pollution killing Europeans secret report says

Slide #5

Geography, Meteorology and Oceanography:
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Makings of 'The Doomsday Map'?

- Destroying a habitat: a threat to Hawaii
- Saving the wetlands
- A shrinking nesting ground
- The death of open spaces
- A shrinking parkway
- Open space plan called skimpy

Slide #6

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Makings of 'The Doomsday Map'?

- New Jersey's folly could teach us a lesson
- LA pays price for poor planning
- City plan called recipe for disaster
- Group's pan Ottawa's new official plan
- Battle looms over future of downtown
- Development in state carefully planned

Slide #7

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**MAKING CONNECTIONS:
LAND AS RESOURCE
AND COMMODITY**

Farmland in central valley gobbled up by developers
Los Angeles Times

Careful land use key to saving space
Ashbury Park (N.J.) Press

Revisions eliminate too much of wetlands
Baltimore Sun



Slide #8

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MAKING CONNECTIONS:

WATER, WATER EVERYWHERE?

Water quality management urged as part of land use planning
Newark Star Ledger

Tax bills aim to conserve water supply
Miami Herald

The Great Lakes: World's largest body of "fresh" water is filthy, probably dangerous and not likely to be cleaned up soon
Toronto Star

Slide #9

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MAKING CONNECTIONS:
GLOBAL WARMING?
GLOBAL FRYING?

Scientists finding many 'leaks' in northern zone
Baltimore Sun

Ozone threat: Time for action, not panic
Ottawa Citizen

Europeans try to plug ozone hole
Philadelphia Inquirer

Ozone-hole conditions spreading: High concentrations of key pollutants discovered over U.S.
Washington Post



Slide #10

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**MAKING CONNECTIONS:
ROOM TO MANOEUVRE,
TIME TO JUMP?**



Professor's Doomsday Map relies on headlines...
Ottawa Citizen

World focus turns to earth
USA Today

Politician's book calls for a "global Marshall Plan"
Toronto Star

Despair: Computers see catastrophe 50 years away
Ottawa Citizen

Slide #11

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The Story Behind the Newspaper Headlines (1)

**That Selection is a Tiny Portion of the
Newspaper Headlines
Assembled More than 15 Years Ago
as part of the
Doomsday Map Project**

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The Story Behind the Newspaper Headlines (2)

**15 years Later, in 2007,
More Dire, More Contentious,
and More Numerous
Doomsday Map Headlines
Appear in North American
Newspapers on a Daily Basis**

Slide #13

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Connecting the Newspaper Weather - Climate Dots in 2006-2007: Science, Common Sense, Lethargy, Action (1)



- Newspapers still reach '77% of the population' (FP, 06/04/11)

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Connecting the Newspaper Weather - Climate Dots in 2006-2007: Science, Common Sense, Lethargy, Action (2)



- **Mass extinctions a risk: Climate study (OttCit, 06/04/12)**
- **'Bad luck' or global warming? (TStar, 06/12/29)**
- **Big hydro and climate change (TStar, 06/12/29)**
- **Giant ice shelf snaps off from Arctic island (TStar, 06/12/29)**
- **What's behind Ottawa's 'asthma spike' (OttCit, 06/12/21)**
- **City weather becoming more erratic each year (OttCit, 06/12/22)**
- **The questions we should be asking (OttCit, 06/12/28)**
- **Glaciers are dying (TStar, 06/12/26)**
- **Change in climate, change in winter fun (OttCit, 06/12/24)**

Slide #15

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Connecting the Newspaper Weather - Climate Dots in 2006-2007: Science, Common Sense, Lethargy, Action (3)



- **We have to change things now (OttCit, 06/04/16)**
- **Cut emissions at the source (OttCit, 06/04/11)**
- **Cancel buses in bad weather (OttCit, 06/12/24)**
- **Begin taking action now (TStar, 06/12/29)**
- **Climate change a 'hot button' political issue (TStar, 06/12/26)**
- **U.S. to list polar bear as endangered (OttCit, 06/12/28)**
- **Time to think green (TSun, 06/04/11)**

Slide #16

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Connecting the Newspaper Weather - Climate Dots in 2006-2007: Science, Common Sense, Lethargy, Action (4)



- **Provinces signing climate deals with states (G&M, 07/01/01)**
- **An exquisite yet fragile orb (TStar, 07/01/02)**
- **Canada's cloudy crystal ball (TStar, 07/01/02)**
- **Civilizations thrive in warm periods (TStar, 07/01/02)**
- **Urban areas must be healthy (TStar, 07/01/02)**

Slide #17

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The Geographer's Lament

With too many wrong things
In too many wrong places,
We have just about _____
All our life support spaces

Slide #18

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Connecting Geography, Meteorology and Oceanography



**Geography and
Geographic Information Systems:
Combining to Create a
Spatially-Aware Information Society**

Slide #19

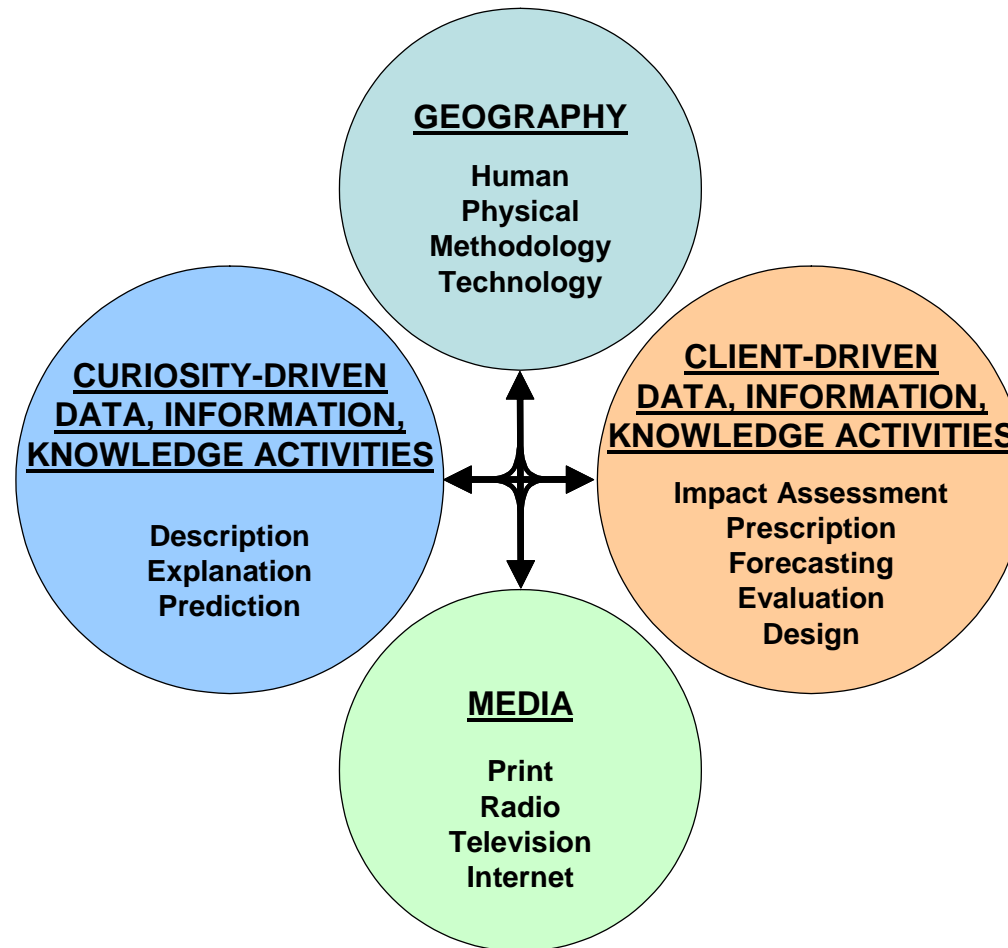
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Slide #20

Geography, Meteorology and Oceanography:
Making Connections



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Accessible (ity)	Concentric	Flow(s)	Landscape	Parcel	Site
Adjacent(cy)	Connect (ion/ivity)	Form	Latitude	Partition	Situation
Agglomerate (ion)	Contiguous	Fringe	Line	Path	Slope
Aggregate(ion)	Continent(al)	Function(al/ity)	Link	Pattern	Somewhere
Along(side)	Conurbation	Geocode	Locality	Pedshed	Space
Amalgamate(ion)	Coordinates	Geodetic	Location	Perimeter	Spatial
Anywhere	Core	Geofactor	Local(ization)	Periphery	Sphere
Arc	Correlation	Geographic	Longitude	Place	Sprawl
Area(polygon)	Countryside	Geomatic	Map	Plain	Spread
Around	Density	Geometric	Margin(al)	Plane	Strip
Association	Diffusion	Geopolitical	Meridian	Point	Structure
Block	Dimension	Georeference	Migration	Pole(ar/ity)	Surface
Border	Disperse(ion)	Geospatial	Morphology	Polygon(al)	System
Boundary	Distance	GIS/GISSc	Movement	Proximity	Territory
Buffer	Distribution	Global(ization)	Nation(al/ization)	Quadrangle	Topographic
Cause(al/ity)	Edge	Grid	Near(ness)	Quadrant	Topology(ic)
Center	Effect	Gridlock	Neighbor	Region	Urban(ex/sub)
Centrality	Elevation	Habitat	Network	Relation(ship)	Vector
Circle	Encroach(ment)	Hinterland	NIMBY	Right-of-way	Walkshed
Close(ness)	Environment	Interaction	Node	Route	Ward
Clump	Everywhere	Intersection	Nowhere	Rural	Warren
Cluster	Extrusion	Intrusion	Object	Scale	Watershed
Coastal	Far	Island	Orientation	Segregate(ion)	Where
Commutershed	Field	Isolate(ion)	Origin	Shape	YIMBY
Concentrate(ion)	Fjord	Land	Overlay	Shed	Zone

Slide #21

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Accessibility	Interaction
Causality	Linkage
Connection	Pattern
Density	Relationship
Functionality	System

Slide #22

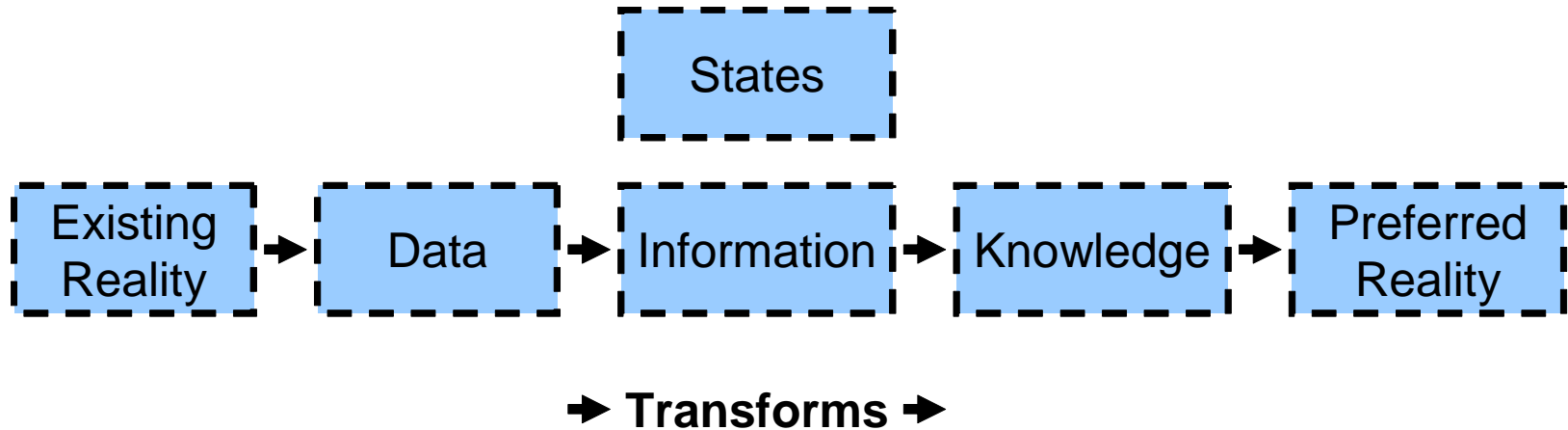
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Slide #23

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**How Are Geographers and
the GIS Community Helping
Canada to Advance as a
Spatially-Aware
Information Society?**

Slide #24

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Check Out the Following Sources



<http://www.cag-acg.ca/en/>

www.gisday.com

http://www.library.carleton.ca/madgic/maps/gisweb/GIS_day/GISDay.htm

http://www.ccge.org/ccge/english/Newsletter/symposium_june_2005.asp

References

For information about the sources used for this presentation contact B. Wellar at wellarb@uottawa.ca

Slide #25

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How are Geographers, Meteorologists and Oceanographers Helping to Turn Science About the Weather and the Climate into Common Sense about the Weather and Our Shared Climate?

Slide #26

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Looking Ahead: Connecting Geography, Meteorology and Oceanography



**How are Geographers, Meteorologists and
Oceanographers Helping to Turn Public Lethargy
About the Weather into Public and Political
Activism Regarding Our Shared Climate?**

Slide #27

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Acknowledgements

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Slide #28

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