THE METAPHORICAL USE OF *ON*

Ignasi Navarro i Ferrando
University Jaume I (Castellón)

ABSTRACT. *An attempt is made at refuting the idea that figurative uses of prepositions are chaotic. Figurative uses of the preposition* on *are explained as the result of metaphorical mappings from the physical domain onto abstract domains. The semantic structure of this preposition in the source domain is explained as a conceptual schema (*support*), which is formed as a combination of three more basic image schemas, namely, the contact schema, the control schema, and the force downwards schema. The Invariance Principle guarantees the preservation of the logic of these image schemas in target domains. The selection of a particular target domain is, therefore, motivated.*

1. INTRODUCTION

In this paper, current metaphor theory is applied to the explanation of figurative uses of the preposition *on*. According to Cognitive Semantics conceptual systems grow out of bodily experience, and are grounded in perception, body movement, and experience of a physical and social character (Johnson 1987). Those concepts that are not directly grounded in experience employ metaphor, metonymy and mental imagery (Lakoff & Johnson 1980). Conceptual embodiment implies that properties of certain categories are a consequence of the nature of human biological capacities, and of the experience of functioning in a physical and social environment. In this vein, we will argue that perception and embodiment imply the elaboration of three dimensions in human cognition: topology, force-dynamics, and function. These dimensions give structure to

perception of the physical domain, which will be the source domain for metaphor and metonymy in the use of prepositions.

1.1. *Metonymy*

The traditional view on metonymy runs that the name of one entity e_1 is used to refer to another entity e_2 which is contiguous to e_1. According to Taylor (1992: 124ff), the entities need not be contiguous in any special sense. Neither is metonymy restricted to the act of reference. "There are countless instances in the lexicon of metonymic extension by the perspectivization of a component of a unitary conceptual structure." (Taylor 1989: 125). Following Lakoff (1987: 84ff) metonymic models can be described as follows: 1 – A target concept A is to be understood for some purpose in some context. 2 – There is a conceptual structure containing both A and another concept B. 3 – B is either part of A or closely associated with it in that conceptual structure. 4 – Typically, a choice of B will uniquely determine A, within that conceptual structure. 5 – Compared to A, B is either easier to understand, to remember, to recognise, or more immediately useful for the given purpose in the given context. 6 – A metonymic model is a model of how A and B are related in a conceptual structure; the relationship is specified by a function from B to A.

Patterns of metonymic meaning extension could consist of the highlighting of certain aspects of one domain, and this process of making one component more salient can give birth to a new domain. In brief, metonymy implies a mapping within a single model, i.e. one category within one model is taken as standing for another one in the same model.

1.2. *Metaphor*

Metaphor has been understood as deviant language by Generative Linguistics where meanings of words are bundles of necessary and sufficient features, and there are clear-cut boundaries between semantic categories. In this context, metaphor is captured by the notion of a violation of a selection restriction, and lies outside the study of linguistic competence.

Cognitive semantics does not view metaphor as a speaker's violation of rules of competence (Reddy 1993; Lakoff & Johnson 1980; Lakoff and Turner 1989; Lakoff 1993). According to this view, metaphor is an everyday language mechanism of concept structure, a means whereby abstract and intangible areas of experience can be

conceptualised in terms of the familiar and concrete. It is motivated by a search for understanding. One cognitive domain can be understood, or even created, in terms of components usually associated with another cognitive domain.

Lakoff (1987: 271ff) contemplates the "possibility that many areas of experience are metaphorically structured by means of a rather small number of image schemas". Metaphors are mappings across conceptual domains that establish correspondences between entities in the target and source domains, and can project inference patterns from the source domain onto the target domain. The system of conventional conceptual metaphor is unconscious, automatic, and constantly in use; it is central to our understanding of experience and to the way we act on that understanding; part of it is universal, part of it culture-specific. Metaphorical mappings are ruled by the *Invariance Principle,* which states that image-schematic structures of source and target domains are consistent. This assumption implies, on the one hand, that the inference patterns of the source domain remain untouched in the target domain, and on the other hand, that only metaphorical mappings are possible when the inference patterns of the target domain are consistent with all or part of the source domain (cf. Lakoff 1990; Brugman 1990; Turner 1990). Furthermore, the generic-level structure of the domains implied in the mapping must also be consistent, and must be preserved by any contextual effects produced in the text where the metaphorical expressions occur (Ruiz de Mendoza 1998).

The most important metaphors are those that have been long conventionalised and built into the language, because they structure the speakers' conceptual system. The figurative uses of prepositions are part of that conventional usage, and are based on the conceptual system.

1.3. *Metonymy, metaphor and spatial meaning*

With respect to spatial semantic categories, it will be shown how certain aspects of the physical domain are highlighted to understand and create abstract domains. What is transferred by a metaphorical mapping is the internal relations or the logic of a cognitive model. Our conceptualisation of models of abstract categories is grounded in our more concrete experience with people, objects, actions and events. The semantic category *ON* activates this mechanism in order to be used in abstract domains. Conceptual schemas based on spatial experience are directly understood, they provide the conceptual basis for uses of prepositions in the physical domain, and are extended metaphorically to structure other domains. Thus, a single linguistic unit like *ON* may express a conceptualisation based on the contact schema in the physical domain. These image-schemas are

perceptively basic, though they are not semantic primitives, but perceptual primitives, in the sense that they are formed as gestalts.

2. THE SUPPORT CONCEPTUAL SCHEMA

Different ways of perceiving space can contribute diverse aspects to the creation of a spatial gestalt. In Deane's (1993: 115) terms, human beings perceive and conceptualise three kinds of space images:

a) *Visual space images*. They represent spatial relationships in terms of separation, contiguity, angle of vision, and any aspect related to the position of entities in relation to each other, i.e. their topological relationship.

b) *Manoeuvre space images*. This kind of perception processes information relative to motor control and the capacity to interact with other people, objects, and the body itself.

c) *Kinetic space images*. They encode the information necessary to calculate force-dynamic interaction, paths, directions, axes, gravity, relative orientation of the participants, etc.

These aspects of perception cooccur in human experience. They are prelinguistic in character, and form part of the human bodily experience that prompts the creation of new concepts in the child's mind. Experiences that combine recurrent sets of space images will prompt a conceptualisation – a construal arrangement – of trajector–landmark relationships, which will trigger the impetus for a new conceptual schema. A conceptual schema of a preposition combines three types of image–schema that define three configurations: a topological configuration, a functional configuration and a force-dynamic configuration. That initial conceptual schema will be applied to the categorisation of new experiences, some of which will not exactly fit the whole set of specifications. The conceptual schema will offer a basis for derived senses by virtue of natural, independently motivated image-schema transformations or shifts. In addition, partial sanction of the schema will mainly consist of profiling or highlighting various aspects of perceptual space. The conceptual schema of the lexical unit ON combines the topological relation of two objects in contact, their function as one of them exerts control over the other, and their patterns of force-dynamic interaction, usually on a vertical up-down axis. For the conceptual schema of ON, the following configuration is posited for the physical domain (cf. Navarro 1998):

1. The trajector achieves or maintains control – over the landmark or itself – through contact of its resting side with the outside part of the landmark. This relationship is called SUPPORT.

2. According to the topological configuration, trajector and landmark bear a relationship of contact, or tend to be in a relation of contact.

3. According to the functional configuration, interaction between trajector and landmark is expectable where the trajector holds control of the situation.

4. According to the force-dynamic configuration, trajector and landmark define a common axis along which their relationship adopts a certain directionality. That axis is prototypically the vertical axis with respect to the human canonical position as standing on the ground, since the human resting side is defined by the soles of the feet. The force exerted by the trajector is prototypically exerted downwards.

The conceptual schema defines a relation of SUPPORT. From the landmark point of view, the trajector is a burden, and from the trajector point of view the landmark is a supporting entity. E.g.[1]: "He preferred sleeping in bed with his head on a pillow." (C10:17); "A tribe in ancient India believed the earth was a huge tea tray resting on the backs of three giant elephants, which in turn stood on the shell of a great tortoise." (C13:1). This conceptual schema can be graphically represented as illustrated in figure 1:
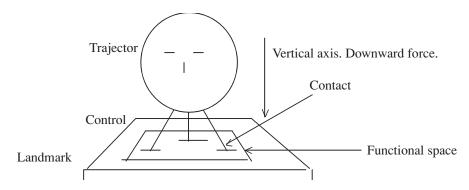

Figure 1. Basic conceptual schema for *ON*: Support.

The general conceptual schema may suffer certain shifts of perspective or profile. Thus, three further construals of the conceptual schema occur:

a) Rotated schema: A non horizontal surface is the supporting side of the landmark. Force downwards is the attribute that makes *ON* contrast with *AGAINST* (force

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1. All the examples used in this paper are taken from Francis, W. N. & H. Kucera (1961). The code number that appears after each example shows the corresponding code in the BC.

sideways). Contact and control are still present. E.g.: "Pictures of her in more glamorous days were on the walls." (F09:112).

b) Axial support: An axis sustains the trajector, as *a ring on a finger*. E.g.: "One medium saw two sheets flapping on a line and found that the name Shietz was significant to the sitter." (F12:89); "A wheel squeaked on a hub, was still, and squeaked again." (G14:53)

c) *Part of trajector is landmark*: A part of the trajector, which is in contact with the actual supporting place, is the landmark of the conceptualisation. E.g.: "She remained squatting on her heels all the time we were there;" (G04:111).

3. METAPHORICAL USES OF *ON*

3.1. *Metaphors of support*

In those domains of thought and knowledge which are conceptualised by speakers in terms of the SUPPORT conceptual schema, English may adopt two perspectives, either that of the trajector, where other entities are conceived of as support, or that of the landmark, where an entity is conceptualised as a burden. In the following metaphors the landmark is mapped onto a supporting entity:

1. CAUSES are SUPPORT (for a decision, for a result, for an action, etc.). The cause which produces an effect or result may be expressed linguistically as the base that supports it. Prepositional verbs like *blame on* may be used with this sense of *on*. Collocations like *on impulse,* or *on charge* occur with this sense, indicating a cause. E.g.: "Varani has been fired on charges of accepting gifts from the contractor" (A09:8); "Rep. Berry, an ex-gambler from San Antonio, got elected on his advocacy of betting..." (A02:28); "Contrary to the thinking of 30 to 40 years ago, when all malocclusion was blamed on some unfortunate habit, recent studies show that..." (F11:25)

2. HELP is SUPPORT: Help offered or received from people or other entities is expressed as the support for action, development, etc. Prepositional verbs like *lean on, count on, rely on, depend on, back on, hang on, hinge on, be based on*, etc. may occur with this sense of *on*. E.g.: "They count on the aid of the neutral countries attending the Geneva conference." (A04:26); "Doctor Fraud's cure-all gadget can prove fatal. Moreover, the diabetic patient who relies on cure by the quack device and therefore cuts off his insulin intake can be committing suicide" (F10:73).

3. RESOURCES are SUPPORT: Resources used to carry on some action or process are conceived of as a support. Prepositional verbs used according to this metaphor are *draw*

on, live on, feed on, leech on, bet on, trade on, sustain somebody on, nourish on, capitalise on, profit on, dine on, fatten on, gorge on, etc. E.g.: "The glass may seem trivial but Communist official hooliganism feeds on such incidents unless they are redressed." (B02:17); "...he is not likely to be duped by extremists who are seeking to capitalize on the confusions and the patriotic apprehensions of Americans." (B04:82); "But the brigadier dines on the birds with relish." (C01:94). This metaphor allows for certain idiomatic usages like *on someone's own*. E.g.: "...the crisis created by the elections which left no party with enough strength to form a government on its own." (A09:95).

4. ARGUMENTATION is a BUILDING: Conclusions in discourse or thought are built on some arguments, which in turn are based on premises, assumptions, presuppositions, etc., which provide a 'basis' for them. E. g.: "...the mutual love of the spouses is the secondary and subjective end. This conclusion is based on two propositions:..." (F15:34).

5. TOPICS are PIECES OF GROUND. The mapping of topics onto pieces of ground corresponds to the general metaphor THOUGHT is SPACE. Many prepositional verbs respond to this pattern, like *speculate on, deliberate on, speak on, comment on, lecture on, write on, inform on, report on, read on, consult on, agree on, insist on*, as well as the corresponding nouns, plus others like *ignorance on, research on,* etc. In turn, the topic is expressed with words like *topic, matter, subject, theme, issue*, etc. E.g.: "The grand jury commented on a number of other topics...." (A01:7); "I challenge Mitchell to tell the people where he stands on the tax issue". (A06:25).

6. MEDIA metaphor: Communication (words, language,...) travels supported by radio waves, sound waves, TV waves, cables, telephone line, internet, etc. E.g.: "IN recent days there have been extensive lamentations over the absence of original drama on television, but not for years have many regretted the passing of new plays on radio." (C14:60).

7. The AIR is a SUPPORTING MEDIUM. E.g.: "...wants real prestige must lead or participate in community improvement projects, not simply serve on the air." (C12:16).

8. PROCESSES are PATHS. A process is understood as a path that somebody or something goes along. E.g.: "...as the prelude to a quarrel between the six attorneys representing the eight former policemen now on trial." (A03:2); "...my plants at a time, leaving one half of them to blossom while the second half is getting started on its new round of blooming." (E02:65).

9. REASONS are SUPPORT (for a decision, a certain policy, a prize, an action, an attitude, etc.). E.g.: "We congratulate the entire membership on its record of good legislation." (B01:14); " to an industry that prides itself on authenticity, he urged greater realism." (C02:91).

Certain idioms may express reason for action like *on order*, *on request, on the score*, *on (the) grounds*. E.g.: "...These are made on special order only, in Kodiak grade (about $310)" (E10:67); "...he was constantly being asked why he didn't attack the Kennedy administration on this score." (A04:38); "Soon some members of the two industry groups doubtless will want to amend their codes on grounds that otherwise they will suffer unfairly from the efforts of non-code competitors." (B02:37).

10. SCALE metaphor: This metaphor occurs when speaking about magnitudes which cannot be measured numerically but in terms of levels (high versus low, shallow versus deep, general versus particular, etc.) such as the social scale, political scale, geographical scale, etc. In this sense, each level provides support for certain phenomena, or the scale may be referred to as a whole, e.g.: "Sandman told the gathering that reports from workers on a local level all over the state indicate that Jones will be chosen the Republican Party's nominee." (A06:33); "If you want to raise feed or carry out some enterprise on a larger scale, you'll need more land." (F13:49). This sense produces collocations like *on + level* that might no longer refer to a scale. E.g.: "...the goal is the establishment of a new atmosphere of mutual good will and friendly communication on other than the polemical level." (F15:14).

11. A favourable STATE OF AFFAIRS is SUPPORT for further action. E.g.: "Since the validity of all subsequent planning depends on the accuracy of the basic inventory information, great care is being taken..." (H06:75); "...other and equally important reasons for establishing meaningful intergovernmental reporting bases on a uniform fiscal year." (H07:40).

12. LAW is SUPPORT (for action, attitude, etc.): Under the term 'law' other types of norms may be included, such as *religion, regulations, driving rules*, and any system of norms, each with its particular scope. Some idioms like *on principle*, are conventionalised according to this sense. E.g.: "For the beatnik, like the hipster, is in opposition to a society that is based on the repression of the sex instinct." (G13:10); "They are non-conformists on principle." (G13:53).

13. KNOWLEDGE is a BUILDING. Knowledge is conceptualised as something that is progressively built on previous achievements. E.g.: "...when the 'Lo Shu' seems to have been at the height of its popularity, was based in large part on the teachings of the Yin-Yang and Five-Elements School, which was traditionally founded by Tsou Yen." (D08:41).

14. THEORIES are BUILDINGS: This metaphor is frequent in the language used to describe scientific theories, or other kinds of theories, to express their constructional character whereby axioms or principles are the base for further theorems. E.g.: "... the position of the "right", as represented by Barth, rests on the following thesis: The only tenable alternative ..." (D02:60).

15. BELIEFS are SUPPORT. People feel supported by their beliefs, religion, ideology, folk theories, etc. E.g.: "A stronger stand on their beliefs and a firmer grasp on their future were taken." (A10:54); ".. people differ in their religious beliefs on scores of doctrines..." (F15:39).

16. Positive FEELINGS are SUPPORT: Feelings are seen as entities on which a person rests with the purpose of good or healthy living. E.g.: "He felt able to end on a note of hope." (B07:44).

17. INSTITUTIONS are SUPPORT for action or activity, in the sense that they provide a context which guarantees moral, economic, financial, or other types of support. E.g.: "He doesn't really need the immense sum of money (probably converted from American gold on the London Exchange) he makes them pay." (C01:79).

18. MAIN COMPONENT is SUPPORT of the whole: The main component of a mixture or complex entity is spoken of as a supporting axis or base on which the other components rest. E.g.: "These widely advertised products, which are used primarily for washing clothes, are based on high-sudsing, synthetic organic actives (sodium alkylbenzenesulfonates)" (J05:4); "Our last joint venture, <Sainted Lady>, a deeply religious film based on the life of Mother Cabrini" (R03:54).

19. PHYSICAL PHENOMENA are SUPPORT for measurement values: In scientific language this is a common metaphorical pattern. Values are spoken of as standing on facts. E.g.: "...rise to local heat fluxes in excess of **f as measured by the authors- the exact value depending on the arc atmosphere." (J02:9); "...the flux of the smallest particles detected is less than that of larger ones. Being based on so few events, these results are of dubious validity." (J07:47).

20. MECHANICAL PRINCIPLES are SUPPORT for machine working, and in a wider range, LAWS OF NATURE are SUPPORT for natural phenomena in general. The correct functioning of devices is spoken of as depending on or standing on rules. This could be seen as a second level metaphor derived from the 'LAW is SUPPORT' metaphor, since nature is spoken of in terms of being ruled by laws. Phenomena are then supported by these laws of nature. E.g.: "With detectors sensitive to three mass intervals and based on a few counts, the second and third Russian space probes indicate that..." (J07:46).

21. A CHANNEL is a PATH. Particles, cells and other entities travel through pipes and tubes in the laboratory as people do on paths. E.g.: "The required amount of carbon tetrachloride was distilled into a series of reaction cells on a manifold on a vacuum line." (J06:27).

In the following metaphors the trajector is mapped onto a burden:

1. RESPONSIBILITIES are BURDENS: Human beings are conceived of as supporting their responsibilities as if these were physical burdens. E.g.: "In 1958, the Conference

endorsed birth control as the responsibility laid by God on parents everywhere." (F15:61).

2. PSYCHIC PHENOMENA are BURDENS for people. E.g.: "it narrowed to her flesh and the sound of it snarled and cracked, settling its own cruel demons on her shoulders while she stood as unchanged, as dark and motionless as ever,..." (P13:57).

3. CONDUIT metaphor: Words are loaded with meaning, and carry it over to the listener. E.g.: "when the work is offered in the theatre and there can be other effects to relieve the burden on the author's words". (C14:71); "...the words of the Lady Da took on very remote meaning." (M06:137).

4. EXPENDITURES are BURDENS: Taxes and other expenditures are understood as burdens for people. E.g.: "One effect of the proposal, which puts a premium on population instead of economic strength" (A07:79); "Failure to do this will continue to place a disproportionate burden on Fulton taxpayers" (A01:17); "...a mammoth new medical care program whereby social security taxes on 70 million American workers would be raised...." (A03:35).

5. DISEASE is a BURDEN: The presence of illness or disease is expressed in terms of a burden supported by the people affected. E.g.: "... a child may swallow food whole and put a burden on his digestive system." (F11:41).

6. PENALTIES are BURDENS: Judicial penalties and other kinds of punishments are expressed as if they were burdens imposed on people. E.g.: "You may reclaim your property, and the penalty on Hesperus is lifted." (M03:16).

Apart from metaphors one metonymic pattern is observed recurrently: 'EVENTS ON PATHS are PATHS'. As people move along a path, they can also think of the event of moving along this path in terms of the path itself. Thus, we can find expressions where the unit *on* is followed by words that express the events of moving on paths, such as *trip, route, ride, hike, tour, walk, voyage, flight, run*, etc. E.g.: "Mr. Freeman said that in many of the countries he visited on a recent world trade trip people were more awed by America's capacity to produce food surpluses..." (B05:27); "In Michigan, there is fine color on route 27 up to the Mackinac Straits, while the views around Marquette and Iron Mountain..." (C15:25).

3.2. *Metaphors based on kinetic images (force-dynamic axis)*

If the force dynamic configuration of the participants is profiled, the interaction axis is highlighted as the central aspect of the relation. Thus, *on* is compatible in context with linguistic units which express motion. The following patterns are observed:

a) *Movement ending in support*: Verbs like *lounge, deposit, set up, lean, recline, put down, land, lay, put, hang, settle,* etc. may be followed by the lexical unit *on* in prepositional verb constructions. E.g.: "The first few days Bob Fogg set his plane down on Towne field back of the State House when the wind was right,..." (F05:41); "Bob Fogg made the first landing on what is now part of the Barre-Montpelier Airport." (F05:54); "Vernon would tilt his hat over one ear as he lounged with his feet on the dashboard, indulging in a huge cigar." (E11:63).

b) *Movement ending in contact plus control of the landmark*: Verbs like *tread, push, press, pressure, impinge, prey, grasp, step,* etc. instantiate this sense. E.g.: "The speed is controlled by pressing on the two brake buttons located where the index finger and thumb are placed when holding the motor."(B13:31); "The combination of thin pattern and very tiny pellets makes it necessary to get on the birds, right now!" (E10:65)

c) *Movement ending in contact*: The control image schema is not sanctioned. This use is found with verbs like *fall, sink, throw, cast, hurl, fling, dash, spit, shed, drip, drop, etc*. E.g.: "... the little chunk of uranium metal that was the heart of the bomb that dropped on Hiroshima." (D13:10); "There is still the remote possibility of planetoid collision. A meteor could fall on San Francisco." (G11:44); "When one of the men in the hall behind us spat on the floor and scraped his boot over the gob of spittle I noticed how the clerk winced." (N06:23).

Contact may be achieved through a violent impact, with verbs like *beat, strike, smite, punch, hit, bump, bang, thump, tap, slap, pat, clap. rap, knock, kick, hammer, drum, blow, jump, splash, smash down, plunk down, thwack, hurtle,* etc. E.g.: " You'll probably get a ball bat on the head." (A13:48); "He had taken a carbine down from the wall and it trailed from his hand, the stock bumping on the wood floor." (N02:60); "Dean leaned from the saddle and gave him a mighty whack on the back." (N03:117).

d) *Movement attempting contact and control of the landmark*. The contact and control image schemas are introduced by the unit *on* itself with verbs like *attack, be, march, advance, turn,* etc. following this semantic pattern. E.g.: "...a base for Communist attacks on neighboring Thailand and South Viet Nam." (A04:25); "But the old man turned on her, jerking the whip from her hand." (P13:42); "True, there had been raids on Naples" (F02:39).

e) *Trajector becomes part of the landmark through contact*. This sense appears in verbs like *add on, attach on, build on*, *take on*, etc. E.g.: "...he was only 4' 10" tall and weighed an astounding 72 pounds, and his greatest desire was to pack on some weight." (E01:12); "Do you love to run up a hem, sew on buttons, make neat buttonholes?" (F06:83).

These force-dynamic images provide the structure of the source domain of the following metaphors:

1. LIGHT is a FLUID: Light is spoken of as if it were a fluid which is cast on other entities. Other nouns that imply degree of lightness like *shadow, shade, colour, brightness*, etc. may also appear as trajector. Verbs like *shine, cast, beam, reflect, blaze* followed by *on* instantiate this metaphor. E.g.: "In any instance, you should determine the exposure according to the type of light which falls on most of the subject area." (E12:55); ...trying to throw light on this question of the significance of mediumistic statements." (F12:54).

2. ACTIONS are DIRECTED MOVEMENTS: Certain gestural actions are carried out so that people address them to other people in a figurative sense. Thus, verbs like *smile, frown, scowl, laugh, grin, wink* and other verbs followed by *on* convey that the action is intended to produce an effect on the addressee, as if 'touched' by it. E.g.: "...the idiosyncrasies and foibles observed there could be anybody's, and the laugh is on us all." (C09:16); "When the sun came out, Stevie strode proudly into Orange Square, smiling like a landlord on industrious tenants."(K06:151).

3. INVESTING is POURING: Money or other resources are spoken of as if they were fluids poured on the entity purchased or the object of investment. Verbs like *waste, spend, disburse, lavish*, etc. may be used followed by *on* in this sense. E.g.: "...1962 will be a tremendously "partisan year". Hence the attention they're lavishing on the CDC." (B11:21); "...We spend millions of dollars every year on fortune tellers and soothsayers." (D07:21).

4. LOOKING is TOUCHING: The act of looking is understood as an act directed towards an entity to gain metaphorical contact. This sense occurs with verbs like *look* (prolonged, fixed and intent), *glance, peep, stare, gaze, glare, pore, peer, set eyes on, fix one's eyes on*, etc. The unit *on* follows these verbs when a kind of effect on the landmark is meant, which is produced by the act of looking. The landmark is usually a human being who is affected (touched) by the kind of look (intense, aggressive, fixed, etc.). E.g.: "... from Mr. Kennedy himself; but never from Mr. Nixon, who looked on reporters with suspicion and distrust." (C11:62).

5. PSYCHIC PHENOMENA are AGGRESSORS. Here, worries and other psychic phenomena are conceived of as external agents that come on people and disturb, affect, touch or control them. Verbs like *fall, descend, creep, touch* and others may appear with this sense of *on*. E.g.: "...produces an odor that provokes animals to attack. It could have the same effect on Communists." (D07:43); "...magic square of three, a mere "mathematical puzzle", was able to exert a considerable influence on the minds and imaginations of the cultured Chinese for so many centuries,..." (D08:12); "...her imagination forced images on her too awful to contemplate without the prop of illusion". (K12:15).

3.3. *Metaphors based on topological images (contact)*:

The topological relation of contact is perceptually prevalent over force-dynamic or functional aspects, as seen in the following image-schematic patterns:

a) *Contact:* Partial sanction of the conceptual schema leads here to profiling the contact between the trajector and the outer limits or boundaries of the landmark. E.g.: "...with his coffee, warming his hands on the cup, although the room was heavy with heat." (K12:68); "Use water on finger to smooth seams and edges." (E15:94); "...controversialists, who could write with a drop of vitriol on their pens." (G07:42);

b) *Attachment*. The trajector's resting part is attached to the landmark. This sense appears with verbs like *engrave, stamp, paint, print,* or *write*. Trajectors express the things attached like *blots, stains, scars, wounds, flecks, spots, tattoos, traces, inscriptions, fingerprints, print letters, dust,* etc. E.g.: "Among some recent imports were seat covers for one series of dining room chairs on which were depicted salad plates overflowing with tomatoes and greens (B10:115); "The primitive-eclogue quality of his drawings, akin to that of graffiti scratched on a cave wall, is equally well known." (C05:26); "... the blot on its escutcheon would have remained indelible." (D05:11); "There is even one set that has "barbecue" written on it." (E14:31).

c) *Trajector is Part of landmark*. The trajector is understood as 'a part of the external side of something' (*nose on face, expression on face, ears on head, peaks on mountain*, etc.), or as a part attached to the whole, and forming part of it (*heels on shoes*). E.g.: "Stacked heels are also popular on dressy or tailored shoes." (B13:9); "Most of the fingers on his left hand were burned off...." (C10:82); "...the ripples that you get on the surface of a pond when you drop a stone into it." (D13:67).

d) *Definite contact*. A landmark designates an external definite zone or area of another entity. Contact is more precise in terms of positional accuracy. Expressions like *side, flank, right, left, part, hand* (metonymically meaning *flank*), *edge,* or the points of the compass occur frequently after *on*. These are in turn followed by a prepositional *of*-phrase which designates the whole entity. Sometimes, however, this entity is omitted, and usage sanctions collocations like *on ...side, on the right, on the left*, etc. E.g.: "At the top of the hill the buildings on the left gave way to a park." (E13:22); "He doesn't think that potting them from a deck chair on the south side of the house with a quart glass of beer for sustenance is entirely sporting." (C01:93); "And the league takes a stand, with great regularity, on the side of right." (B01:23). Idioms like: *on the one hand....on*

the other hand, on the contrary, on the part of, on behalf of, and *on edge* may be considered as a result of this usage of the lexical unit *on*.

e) *Contact with limits*. The landmark is construed as an area, so that its limits are clearly defined against the background, and *on* implies "contact with the external side of the landmark". This sense occurs with landmarks like *street, square, park, lake, road, river, sea, bay, way, track, coast, shore, beach, bank,* etc. (as areas with outer limits). E.g.: "the brand-new Mayfair Theater on 46th St. which has been made over from a night club." (C13:41); "All this near tragedy, which to us borders on comedy, enables us to tell the story over and over again," (D05:15); "These striking, modernistic buildings on the East River are open to the public..." (E12:22); "Obviously the farm should be on an all-weather road." (F13:79); "The <John Harvey> arrived in Bari, a port on the Adriatic,..." (F02:3).

These images provide the source domain for the following metaphors:

1. PRESENCE IS CONTACT. The trajector is some event, state of affairs, or situation that is present to human sight or perception. Thus, *on* appears in collocations like *on exhibit, on display, on view*. E.g.: "The current exhibition, which remains on view through Oct. 29, has tapped 14 major collections and many private sources." (C12:64); "Two sharply contrasting places designed for public enjoyment are now on display." (C15:32).

2. CONTENTS are the PHYSICAL CHARACTERS used to express them (<Meanings are the words that expressed them). This seems to be a metaphor mapped on the attachment image. The contents of *books, tapes, lists,* etc. are spoken of as if physically attached to them, as if they really were the physical printed ink letters, magnetic signals, etc. on them. E.g.: "...the measure would merely provide means of enforcing the escheat law which has been on the books since Texas was a republic." (A02:6); "The Central Falls City Council expressed concern especially that more foods be placed on the eligible list." (A05:38); "He is publicly on record as believing Mr. De Sapio should be replaced for the good of the party." (A07:11); "...who has been able to trace the letters to the national archives, where they are available on microfilm." (B12:31). Certain collocations of *on* correspond to this usage, like to be *on the list, to be on the schedule, to be on the plan*. E.g.: "The esplanade eliminates Grovers ave., which on original plans ran through the center of the development..." (A09:6).

3. A GROUP is a WHOLE. Certain collective nouns like *team, staff, committee, board, commission,* etc. where a member is conceived of as a small part attached to the whole and forms a part of it. This metaphor is mapped onto the *trajector–is–part–of–landmark* image. E.g.: "...Mrs. Geraldine Thompson of Red Bank, who is stepping down after 35 years on the committee." (A06:86); "Three positions on the Oak Lodge Water district board of directors have attracted 11 candidates." (A10:47); "... I'm not going to be any

25th man on the ball club" (A13:40); "... he was on the managerial staff of the freshman football team." (B12:36); "On a team a man feels he is a part of it and akin to the men next to him." (B14:27).

3.4. *Metaphors based on functional images (control)*

The control image schema is profiled through partial sanction of the conceptual schema. The following patterns instantiate the control relationship expressed by *ON*:

a) Areas containing dwellings, like farms or states under the supervision of people. E.g.: "I'm called The Wrangler". "Nice to know you. Don't you have to spend any time on your ranch?" (P06:127); "The worker who lives on a farm cannot change jobs readily." (F13:6).

b) Buildings and places which are centres of activities (Stock Exchange) under the control of people who carry on their activity there. Towns, streets, places of employment and work, jobs, etc. construed as under the control of some person. E.g.: "... Desmond D. Connall who has been called to active military service but is expected back on the job by March 31." (A10:2).

c) Human control on artifacts, machines, instruments, or circumstances in general. Verbs and nouns that imply this relationship are *work on, decide/decision on, focus on, policy on, act/action on, influence on, check on, play on,* etc. E.g.: "He missed the 1955 season because of an operation on the ailing knee." (A12:19); "... to devote all his time and attention to working on the Berlin crisis address he will deliver tomorrow night to the American people." (A03:12); "...he put Seaman 2/c Donald L& Norton and Seaman 1/c William A& Rochford on the guns and told them to start shooting the moment they saw an enemy silhouette. (F02:62); "...action on a new ordinance permitting motorists who plead guilty to minor traffic offenses to pay fines." (A05:79).

d) Groups or institutions that exert control on some chunk of social life. E.g.: "...executive director of the new Committee on Juvenile Delinquency and Youth Crime." (A04:71).

e) In general, expressions that denote certain control of people over their activities or some other people, e.g. *be on sb., call on sb., shut the door on sb*, *on guard, on schedule, on alert, on duty, on the lookout, on call* (ready to come at a call, or controlling calls), *on hand* (imminent or about to occur; *hand* is under control, since it has no time to react at what is about to come), etc. E.g.: "The work week of attendants who are on duty 65 hours and more per week should be reduced." (B01:52); "...orthodontists will recommend waiting four or five years before

treatment. The child is kept on call, and the orthodontist watches the growth." (F11:92); "The contents were highly embarrassing to American spokesmen, who were on hand to promise Latin Americans a 20 billion dollar foreign aid millennium." (B03:79).

The control schema provides the source domain for the following metaphors:

1. SEEING is CONTROL: With expressions like *look on, focus on, give on, face on, spy on, keep an eye on, etc.* where the sight of the trajector is conceived of as if controlling the visual field where the landmark is included. E.g.: "The window looked out on the Place Redoute." (K13:60); "Keeping her frightened gaze on the men at the counter, she began to feel her way to the door." (L03:28.); "Let us look in on one of these nerve centers –SAC at Omaha– and see what must still happen..." (G03:70); "Every eye was on him as he began to speak." (K10:21).

2. FEELINGS are CONTROLLERS. Certain psychic phenomena are spoken of as if they controlled people's attitudes and actions. E.g.: "A good feeling prevailed on the SMU coaching staff Monday,..." (A12:36).

3. LAW is CONTROL. Law, norms, regulations, etc. are conceived of as a device for control of other people's actions or activities. E.g.: "This prohibition on love has an especially poignant relation to art;" (G15:20).

3.5. *The time metaphor*

According to the time metaphor, time is understood as a path in physical space (Clark 1973; Lakoff and Johnson 1980). On a path people have two options, either remain still, or move along. Both options offer two further possibilities. In the first case, people may stand either facing other things coming, or with their back oriented towards them. In the second case, people may move either ahead or with their back oriented toward the sense of movement, let us say 'backwards'. In our culture the Future is ahead of us and we move forward to meet it. Thus, if we remain still on the time path, we see the Future coming on us. Moreover, we look ahead in order to meet the Future. This seems natural, but it is by no means the most natural option: If it is the case that people know what they can see, and they can see what is ahead, then the Past, and not the Future, should be ahead in the metaphor. Our position on the time path could be with our back oriented towards the Future, and our faces towards the Past, so that we can see the Past but not the Future. So, the Past would fade away in the distance as time goes by, with us proceeding 'backwards'. On the contrary, in our culture we move ahead, because we look forward in order to meet the Future. The lexical unit *on* exploits both senses of the Western metaphor, the stative sense and the

dynamic sense. Wierzbicka (1993) points out that *on* is used with periods of time, understood as extensions of space, and their duration. However, she does not discuss the relation of extension and duration with the two metaphorical options, standing and moving on the time path.

In the temporal use of *on*, the relation of the trajector with the period of time is one of contact in the sense that it occurs as long as that period lasts. The event, action, etc. which we refer to as *on a period of time*, may occur *at the beginning, at the end*, *at any time within that period,* or *at the period* as a whole. The difference with respect to the lexical unit *at* resides in the fact that *at* exploits only the stative sense of the metaphor, so that it implies coincidence with the whole period. That is why *at* is more often than not used with very short periods, since complete coincidence is easier to conceptualise in those cases. *On*, however, allows for the choice of locating the event *at* any point of the period referred to. Since the dynamic sense of the metaphor is present, the events, activities, etc. that play the role of trajector may also be in contact with successive parts of the period referred to. Thus, *on Thursday* means *at any time as long as Thursday is on*. Let us compare the following sentences:

> (1) "Mr. Notte was responding to a resolution adopted by the Central Falls City Council on July 10..." A05:28.
> (2) "At this late date, it is impossible for St. Michael's College to find a suitable replacement for me." B26:51

In (1), it does not matter when the resolution is adopted, as long as it is at the beginning, at the end, or at successive points of the period referred to as *July 10*, i.e. along with its whole duration. In (2), the period referred to as *this late date* is coincident as a whole with the impossibility to find a replacement, and its duration as such is not relevant. Some contexts will exclude *at*, others will exclude *on,* still others will allow for both. That, however, does not imply synonymy, but alternative construal. According to this argument we find *on* used with: dates, names of week days, nouns referring to a day –like anniversary, Christmas, Easter– nouns denoting periods of time, parts of the day, etc. E.g.: "...the levy is already scheduled to go up by 1 per cent on that date to pay for other social security costs." (A03:43); "... the types of merchandise that may be sold on the Sabbath." (A05:37); "It is far better to have such conditions treated in advance than to have them show up on the honeymoon where they can create a really serious situation." (F07:39); "On spring and summer evenings people leave their shops and houses and walk up through the lanes." (G05:53).
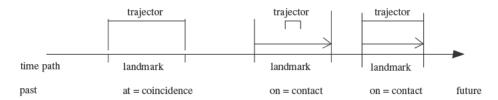
Figure 2. Time periods with *at* and *on*

Certain collocations like *on + present participle* may be understood with the help of the above account. The participle refers to an action or activity with a certain duration. The trajector may be located on the time path at several points along the path as long as the activity lasts. E.g.: "He recalls with a wry smile the wit who said, on returning from a homecoming reunion, that he would never go again." (B14:18).

The meaning of *on* allows for contact of the trajector – event, activity, action, or a period of time – with the landmark's outer limits, (as shown in figure 3, below) in expressions like the following:

1. *On time*: When the span of time referred to is an arranged time with hardly any extension, the trajector may be just in contact with the boundary of the time arranged, i.e. immediately after or immediately before. Thus, this expression has been conventionalised to express punctuality.

2. *Later on* conveys the idea of a later time just in contact with the present or any other period which is taken as a reference. *Later* expresses any time to come, whereas *later on* expresses the time to come just after the reference time, which is expressed by adverbials like *now, in the meantime, for the present*, etc. E.g.: "Money for its construction will be sought later on but in the meantime the State Hospital board can accept gifts and donations of a site." (A02:36).

3. *from + [period of time] + on*. The time referred to by *on* is in contact with the period expressed, i.e. the time which begins immediately after that period. E.g.: "...healing, and well doctored with simples, before they dished up the victuals. From then on, in keeping with the traditions they had followed since childhood, the whole group settled down." (N13:54).
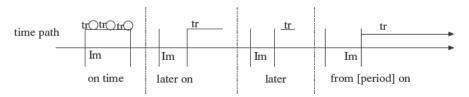

Figure 3. Some expressions with *on*

4. CONCLUSIONS

It has been shown that figurative uses of the preposition *on* are not whimsical or chaotic. Their motivation can be traced to image schemas that constitute the conceptual schema of this preposition, as it refers to the physical domain. That conceptualisation based on linguistic input plus bodily and social experience provides a source domain for metaphorical mappings onto other domains. Most of these mappings project the whole conceptual schema –called the SUPPORT schema– onto abstract domains. Other mappings profile the projection of one of the image–schematic structures within the conceptual schema, namely, topological images, functional images, or force–dynamic images. The Invariance Principle determines which abstract domains are available as target domains for the SUPPORT schema, the CONTACT schema, the CONTROL schema and the FORCE DOWNWARDS schema. Thus, evidence is shown that idioms and collocations where *on* appears are semantically motivated by metaphorical mappings whose source domain is a conceptual schema (support) that emerges as a combination of three dimensions: topology (contact), function (control), and force-dynamic interaction (downwards force on a vertical axis).

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