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Friday, February 10, 2017

Mr. Paul Glover, President
Canadian Food Inspection Agency
Via e-mail: francine.morin@inspection.gc.ca

Dear Mr. Glover:

**Re: Regulations Amending the Health of Animals Regulations (Part XII)
Statutory authority Vol. 150, No. 49 — December 3, 2016
Sponsoring agency: Canadian Food Inspection Agency**

The Canadian Veterinary Medical Association (CVMA) is the national and international voice for Canada's veterinarians. The CVMA facilitates the development of unified viewpoints on issues for which the veterinary profession advocates and in which it believes. CVMA is comprised of over 5500 licensed veterinarians working in all of Canada's provinces and territories as private general and specialist practitioners, researchers, educators and public servants. Veterinarians provide unique expertise in regards to the health and welfare of all animals including food-producing animals (livestock, poultry, aquaculture), equine, zoo, laboratory and companion animals, among others. During 2016, the veterinary profession in Canada provided oversight of the health and welfare of some 12 million cattle, 13 million hogs, 7 million dogs, 8 million cats (2016 data), almost 1 million horses (2010 data) and 3.7 million laboratory animals (ranging from fish to non-human primates).

A priority for Canadian veterinarians includes promotion and support of the health and welfare of animals which in turn underpins a safe and secure food supply, public health, and a strong economy by facilitating international trade in animals and animal products. The CVMA membership comprises Canada's national veterinary voice and a source of authoritative expertise on veterinary science, animal health and welfare, and veterinary public health.

Established by an Act of Parliament in 1948, the CVMA remains a leading advocate for animal welfare in Canada, through actively advocating for and promoting the humane raising, handling and transportation of animals, developing relevant position statements on, for example, animal abuse and humane slaughter and contributing to the Scientific and Code of Practice Development committees of the National Farm Animal Care Council (NFAACC). In addition, CVMA has been a strong advocate for regulatory amendments to the federal Health of Animals Act that would address gaps in the current transport regulations.

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The CVMA believes that the status quo with respect to federal regulations pertaining to the transportation of animals is unacceptable. In this regard the CVMA welcomes the publication of the proposed Regulations Amending the Health of Animals Regulations published in Canada Gazette Part I (December 3, 2016) (the “Regulations”).

While the proposed regulations represent an improvement over existing regulations, the CVMA believes that further modifications are necessary. The CVMA respectfully offers herein feedback on the proposed regulations as general as well as specific and detailed comments (the latter contained in Annex A).

GENERAL COMMENTS

1. CVMA believes that the proposed conditions listed in the “compromised” animal category (Section 136 (1)) should be re-considered, noting that many should be placed in the “unfit for transport” category (please see Annex A).
2. The CVMA generally supports the wording used in relation to “compromised animals” in the CFIA *interpretive guidance documentation for regulated parties*. It is the CVMA’s opinion however that the transport of animals for up to 12 hours (as per Section 159.1(2)) with the types of conditions listed under the “compromised animal” category would result in considerable suffering unacceptable to veterinarians and members of the public.
3. The CVMA *strongly* supports the removal of the term “undue suffering” from the current regulations and endorses its replacement with the word “suffering” in the proposed Regulations so as to reduce the ambiguity present in the current Regulations. (Note that in Annex A CVMA suggests a definition for “suffering” as follows: “**Suffering** describes a condition where an animal perceives pain or some other negative affect that is prolonged. Suffering can be associated with both physical and emotional disorders.”)
4. The CVMA *strongly* supports the reduction in the time intervals that animals may be transported without feed, water and rest (as per Section 159.1 (2)). It is the CVMA’s opinion however that the proposed maximum intervals for animals are still longer than they should be (please see Annex A for details).
5. The CVMA believes that multiple approaches are required to ensure that, even though an animal arrives at a destination “alive”, suffering has not occurred along the way. In addition to proposed outcome-based measurements, the CVMA believes that weight must also be given to veterinary research and professional advice and opinion with respect to the assessment of suffering and assistance with enforcement of Regulations.
6. While the addition of outcome- based measurements may be useful in, for example, enforcement efforts, they are retrospective rather than preventive in nature and thus are not always a practical way of avoiding the suffering that can be associated with very long journeys. In fact, the quality of the journey, animal management during transit and animal fitness and its assessment during transit are rarely, if ever, ideal. Please see Annex A for specific examples.

Once again, the CVMA wishes to express its support for the general direction being taken by the proposed Regulations. However, the CVMA is strongly of the opinion that the above suggested modifications and those proposed in Annex A are necessary to ensure that the new Regulations are effective and meaningful in strengthening the humane treatment of animals during transport.

The CVMA encourages the federal government to dedicate the necessary resources for enforcement, training and research in order to implement and sustain the new Regulations so as to achieve the desired Canadian animal welfare outcomes.

As Canada's national voice for professional veterinary expertise in Canada, CVMA looks forward to receiving more information on how the proposed Regulations will be enhanced and/or policies developed to address the concerns expressed above.

Once again, thank you for the opportunity to comment on the proposed regulations.

Yours sincerely,

A handwritten signature in cursive script that reads "Troy Bourque".

Troy Bourque DVM
CVMA President

ANNEX A

Specific and Detailed Comments on Regulations Amending the Health of Animals Regulations (Part XII) Statutory authority Vol. 150, No. 49 — December 3, 2016

1. Table 1. Proposed maximum intervals for access to feed and water

The following criteria or reasons could be used as a basis for restricting journey time beyond what is proposed:

- Aspects of welfare are adversely affected after a specific journey duration and thus stopping a journey before this occurs would help to minimize any adverse effects of transport;
- Transportation is a continuous, aversive experience for animals and restricting journey time would minimize the duration of this experience;
- There are many risk factors associated with transportation that have the potential to adversely affect aspects of welfare and the longer the journey, the greater the risk;
- If animals were sub-clinically infected with a disease, a restriction on journey time would reduce the distance that animals could be transported within a single journey and this would slow down the distribution of the infectious disease and allow more time for additional disease control measures to be instituted after clinical signs of the disease become apparent.

Reference:

Cockram, M.S. 2007. *Criteria and potential reasons for maximum journey times for farm animals destined for slaughter*. Applied Animal Behaviour Science. 106: 234-243

2. Section 136 (1) and Table 1.

Definition of compromised animal and proposed 12 h maximum interval that they can be transported without feed, safe water and rest.

In some circumstances, transport can represent significant challenges even to fit and healthy animals. Animals that are weak or suffering from disease or injury are most likely experiencing welfare issues, such as pain and sickness before they are transported. The transportation of animals with disease or injury is likely to exaggerate these pre-transport issues. In addition, they are less able to cope with challenges such as getting on and off of the vehicle, maintaining stability, avoiding fatigue, and coping with feed and water restriction and extreme thermal environments.

To transport animals with the conditions noted below for up to 12 hours, then potentially feed, water and rest them for 8 hours before starting another journey sequence is likely to result in suffering and could be considered as cruel . For the conditions listed it is not the duration without feed, water or rest that is the issue, it is the length of time that they are left in this condition to experience pain and discomfort, the risk of deterioration of the animal during a 12 hour journey

and the aggravation of the condition by transportation. Proposed mitigation measures for compromised animals such as, segregation etc will not reduce important causes of the suffering caused by transportation of animals with these conditions.

- (a) bloated animal
Bloat makes an animal unfit for transport. Bloat is a condition where gas accumulates in the rumen causing excessive stretching of tissues with associated pain and discomfort and can lead to death from respiratory failure. Acute bloat can be accompanied by panting and labored breathing, unsteady gait and discomfort. If the animal goes down, death can occur rapidly. There is a risk that an animal with bloat will deteriorate during a 12-h journey either due to additional accumulation of gas in the rumen, fatigue associated with respiratory distress or lateral recumbence due to fatigue or falls during transport.
- (b) has labored breathing;
An animal will not be showing signs of labored breathing unless it is experiencing extreme difficulty such as thermal conditions affecting its physiological responses, has an underlying respiratory pathology or is in pain. It is a condition that makes an animal unfit for transport.

During transport, animals require efficient respiratory function to enable them to cope with environmental demands such as:

- (i) increased temperature and humidity that requires the animal to lose heat from evaporation of water from its respiratory tract, and
- (ii) muscular activity associated with prolonged standing and responses to vehicular movement to maintain stability that increases oxygen demands of tissues

If an animal is showing signs of labored breathing over a prolonged period, this will result in excessive respiratory effort, discomfort and fatigue. It can also be associated with breathlessness that is a negative affective experience (Reference: Beausoleil N. J. and Mellor D. J. (2015) *Introducing breathlessness as a significant animal welfare issue*. New Zealand Veterinary Journal 63, 44-51).

Painful conditions

- (c) has acute frostbite;
- (e) has not fully healed after an operation, including dehorning or castration;
- (i) has an unhealed or acutely injured penis;
- (j) has a rectal or vaginal prolapse;

These conditions are likely to be painful even in a stationary animal. Movement of body parts during loading, unloading, in response to vehicular movements, in response to other animals and during postural changes are likely to cause movement of the injured tissue and result in additional pain.

Lameness

- (f) is slightly lame in one or more limbs with slightly imperfect locomotion;
- (g) has difficulty climbing a ramp or rising;

Animals with these conditions are likely to deteriorate during a 12 hour journey. Exercise associated with prolonged standing and responses to vehicular movement to maintain stability has the potential to aggravate these conditions. Most lameness is caused by pain and therefore responses to vehicular movement to maintain stability has the potential to cause additional pain due to limb movement.

- (1) is a wet bird;
This is an intriguing and important addition to the list of compromised animals. However, there are many implications that arise from adding this condition to the list. If a wet bird was transported, measures would be necessary to prevent the animal's suffering, injury or death during loading, transportation and unloading and it would have to be transported directly to the nearest place, other than an auction market or assembly yard, to receive care or treatment or to be humanely killed, e.g. transported to the closest processor, not necessarily transported to the intended destination of the birds if they were not wet.

It is appreciated that additional measures would have to be taken to prevent the bird from dying, but it is highly likely that in cold conditions, a wet bird would not survive a 12-h journey. For example, a wet broiler would become hypothermic (i.e. experience a drop in body temperature of 14 °C) within 3 h, if exposed to a temperature of -4C and air movement of 0.7 m/s (Reference: Hunter, R. R., Mitchell, M. A., & Carlisle, A. J. (1999). *Wetting of broilers during cold weather transport: A major source of physiological stress?* British Poultry Science, 40(Suppl.), S48-S49).

3. Section 159. Proposed maximum intervals that animals can be transported without feed, safe water and rest.

The use of outcome-based requirements in addition to specified maximum time periods is at first sight innovative and useful. However, there are several issues that affect the value of these outcome-based requirements.

- a) *Potential effects of journey duration that are not specifically related to periods without feed, water or rest.*

The detrimental effects of journey duration are not just related to the length of time without feed, water and rest before an animal shows either signs of dehydration, metabolic abnormality due to feed restriction or fatigue. For some species, there is evidence that the risk of mortality increases with journey duration.

For cattle there is evidence that suggests that the risks of becoming non-ambulatory or dying increases when the journey exceeds 30 h (References: González et al., 2012; Malena et al., 2006).

References:

González, L.A., Schwartzkopf-Genswein, K., Bryan, M., Silasi, R. and Brown, F. (2012), 'Relationships between transport conditions and welfare outcomes during commercial long haul transport of cattle in North America', *J.Anim.Sci.*, 90(10), 3640-3651.
Malena, M., Voslarova, E., Tomanova, P., Lepkova, R., Bedanova, I. and Vecerek, V. (2006), 'Influence of travel distance and the season upon transport-induced mortality in fattened cattle', *Acta.Vet.Brno*, 75, 619-624.

For broilers, the risk of mortality increases with journey duration and this effect is seen especially when the birds are exposed to extreme thermal conditions. For example, transportation of broilers for 24 hours will result in greater mortality than a journey of 4 hours. (Reference: Nijdam, E., Arens, P., Lambooi, E., Decuypere, E., & Stegeman, J. A. (2004). Factors influencing bruises and mortality of broilers during catching, transport, and lairage. *Poultry Science*, 83(9), 1610-1615).

b) *Combined use of outcome measurements and set maximum intervals without feed, safe water and rest.*

In principle, this approach is a good one in that if any animal shows signs that it is in difficulty before the maximum limits are reached then action must be taken. However, there are several difficulties in identifying unambiguous changes in the proposed outcome measures that would indicate that the journey should be terminated when a specific change in the outcome measurement had been reached. In situations where responses to periods without feed and water can be identified that are often linear type responses without a clear cut-off point or the changes occur after a considerably shorter duration than the proposed maximum durations. In the later situation, this casts doubt on the 'validity'/relevance of the proposed durations in relation to the reduction of suffering duration transportation. (Reference: See discussion in Cockram, M.S. 2007. *Criteria and potential reasons for maximum journey times for farm animals destined for slaughter*. *Applied Animal Behaviour Science*. 106: 234-243.)

There is a major practical difficulty in identifying dehydration, nutritional metabolic abnormality and fatigue in a quantifiable manner that would provide unambiguous evidence to present to a court, as per the following:

a) severity of dehydration response

If a were court interpreting this regulation at face value, then if any signs of dehydration associated with water restriction were identified, no matter how severe, and regardless of whether expert opinion considered that the severity of dehydration were likely to be associated with suffering, then this would be a violation. Responses to dehydration are largely incremental with no specific cut-off point until the animal shows clinical signs, such as sunken eyes, changes in skin elasticity, capillary response times, collapse and eventually death. If blood composition were measured, one approach would be to compare the measured value with published "normal" values and to interpret a statistical deviation from normal as dehydration.

b) nature of nutritional metabolic abnormality

The interpretation of nutritional metabolic abnormality is not clear. In response to feed deprivation/fasting, animals will eventually start to utilize their body energy reserves. They tend to use their carbohydrate reserves first, followed by their fat reserves and finally they use protein in muscles. Although there are specific changes in many animals that would indicate that they were experiencing difficulty in meeting their energy needs, e.g. hypoglycemia and production of ketone bodies, these changes may not occur in some animals until the condition is severe. In

contrast, in some types of animals, metabolic abnormality can occur after periods without feed that are far shorter than the specified maximum intervals without feed. For example, broiler chickens utilize all of their liver glycogen reserves after 6 h without feed, but the maximum interval without feed that is suggested for broilers is 24 h. Sheep utilize their liver glycogen concentration within 24 h but for sheep, the proposed maximum period without feed is 36 h.

c) signs of suffering due to fatigue

It can be very difficult to identify signs of fatigue in animals. Whether there is a practical way of identifying fatigue, e.g. by failure of animals to rise when approached by a human, remains to be investigated. (Reference: MS Cockram, E Murphy, S Ringrose, F Wemelsfelder, HM Miedema, DA Sandercock (2012). *Behavioural and physiological measures following treadmill exercise as potential indicators to evaluate fatigue in sheep*. *Animal* 6: 1491-1502.)

Detailed comments and recommendations on specific proposed regulations

4. Section 136 (1)

Definition of “unfit”

The following amendments are proposed.

a) Change “ (b) has a fractured limb or pelvis” to “(b) has a bone fracture “

This would add fractures to the spine, jaw, ribs etc to this list. Although most fractures to the spine would make an animal non-ambulatory, this cannot be certain.

b) Criterion (c) in the list i.e. “has any other fracture that impedes its movement or causes suffering” is problematic. All fractures are likely to be associated with pain even in a stationary animal. Movement of body parts during loading, unloading, in response to vehicular movements, in response to other animals and during postural changes are likely to cause movement of the fractured bone and result in additional pain. Therefore it is difficult to conceive of a situation where a non-stabilized fracture would not cause suffering during transport.

c) Definition of “Commercial carrier”

If a carrier rented but did not own the vehicle used to transport animals, then they would not fall within the definition of a commercial carrier.

To avoid ambiguity, the regulations should make it clear that a producer who transports their own animals for financial benefit would be considered a commercial carrier.

d) Definition of “humanely stun”.

Stunning that is undertaken during the slaughter of animals for human consumption does not necessarily result in irreversible unconsciousness. It is humane as long as it causes immediate loss of consciousness and the animal remains unconscious until it dies (either from respiratory failure due to brain damage or from a secondary method). In slaughter for human consumption,

many types of stunning e.g. captive-bolt stunning cannot be considered to always cause irreversible unconsciousness. There are technical difficulties in ensuring that an effective stun always occurs and the animal is permanently unconscious (e.g. see Atkinson et al., 2013; Bourguet et al., 2011; Gregory et al., 2007). The stunning has to be considered as temporary. To prevent recovery from stunning the animal has to be exsanguinated within a very short period of time. The “stun to stick interval” should ideally be no longer than 15 s, and not longer than 60 s (Humane Slaughter Association <http://www.hsa.org.uk/bleeding-and-pithing/bleeding>). The definition of humanely stun, as used in section 141 (3) (a) (ii) would make it legal for an unfit animal to be rendered permanently unconscious, but not killed. Unless the animal was left to see whether it was going to recover there would be no practical way of knowing whether a stunned animal was temporally unconscious or permanently unconscious. It is not necessary to include the wording “humanely stunned” in this section. Again, in relation to section 141 (5) (c), unless the animal was left to see whether it was going to recover rather than been euthanized as soon as possible, there would be no practical way of knowing whether a stunned animal was temporally unconscious or permanently unconscious.

The term “humanely stun” should be replaced by “euthanized”.

References

- Atkinson, S., Velarde, A. and Algers, B. (2013), '*Assessment of stun quality at commercial slaughter in cattle shot with captive bolt*', *Anim.Welfare*, 22(4), 473-481.
- Bourguet, C., Deiss, V., Tannugi, C.C. and Terlouw, E.M.C. (2011), '*Behavioural and physiological reactions of cattle in a commercial abattoir: Relationships with organisational aspects of the abattoir and animal characteristics*', *Meat.Sci.*, 88, 158-168.
- Gregory, N.G., Lee, C.J. and Widdicombe, J.P. (2007), '*Depth of concussion in cattle shot by penetrating captive bolt*', *Meat.Sci.*, 77(4), 499-503.

5. Section 138 (2) Training

Add “fitness for transport” to this list.

6. Section 139(1) Contingency plans

Specify that the contingency plan should be in writing.

7. Section 141 Transport of Unfit Animals

141 (3) (ii) delete “humanely stunned” (see above for explanation)

141 (5) (c) delete this section i.e. humanely stunned (see above for explanation)

8. Section 145 (1) Unloading

Section 145(1) (c) would effectively make it illegal for someone to unload an animal that trips, slips or falls during unloading. This section requires that the surface used prevent these events from occurring. However, even with an optimal surface some animals are likely to slip or trip. Replace with “has a secure surface that does not predispose an animal to trip, slip or fall and prevents injury. “

9. Section 145 (2) slopes for loading and unloading

The basis for the maximum slopes proposed for the various species are not clear and there is a case for reducing these maximum slopes.

For example,

For cattle, ramp angles > 20 degrees make loading more difficult and cause increased heart rate (Holleben et al., 2003). During loading, cattle can move along a level ramp smoothly, but if the ramp angle is > 7 degrees some cattle will resist climbing the ramp, and some may fall or slip (Gebresenbet et al., 2012). Loading steers onto a vehicle via a 24o ramp can increase serum cortisol concentration and rectal temperature (Pettiford et al., 2008).

References:

- Holleben, K.V., Henke, S., Schmidt, T., Bostelmann, N., Wenzlawowicz, M.V. and Hartung, J. (2003), '*Handling of slaughter cattle in pre and post transport situations including loading and unloading on journeys up to 8 hours in Germany*', Dtsch.Tierarztl.Wochenschr., 110(3), 93-99.
- Gebresenbet, G., Bosona, T., Feleke, M. and Bobobee, E.Y.H. (2012), '*Improving loading facilities and methods to minimize stress on animals during transport from farm to abattoir*', J.Agr.Sci.Tech. A, 2(6), 784-799.
- Pettiford, S.G., Ferguson, D.M., Lea, J.M., Lee, C., Paull, D.R., Reed, M.T., Hinch, G.N. and Fisher, A.D. (2008) '*Effect of loading practices and 6-hour road transport on the physiological responses of yearling cattle*' Aust.J.Exp.Agric, 48, 1028-1033.
- For sheep, depending on the width, the time taken by sheep to move up or down a ramp is greater at 45 degrees than at 30 degrees. (Reference: Hitchcock, D. K., & Hutson, G. D. (1979). *The movement of sheep on inclines*. Australian Journal of Experimental Agriculture and Animal Husbandry, 19(97), 176-182.)
- For pigs, an angle of no greater than 20 degrees is recommended (Reference: Lambooi, E. 2014 *Transport of pigs*. In *Livestock Handling and Transport*, 4th Edition Edited by T. Grandin. CABI Publishing, Wallingford, Oxon, UK. P 280-297.)

10. Section 146 Weather Protection and Ventilation

The proposed wording may not adequately cover all circumstances where an animal would be at risk of thermal distress. One difficulty is the separation from section 147 on overcrowding. There are obvious interactions between the temperature and humidity within a vehicle and the stocking density. Section 147 (2) requires the enforcement authority to be able to attribute hyperthermia, hypothermia or frostbite to the loading density or the size of the conveyance. In reality, these conditions are likely to be caused by multiple factors such as an interaction between external environmental conditions, stocking density and ventilation.

Suggested revision

146 No person shall confine, load, transport or unload an animal, or cause one to be confined, loaded, transported or unloaded, in a conveyance or container if the animal is likely to suffer, sustain injury or die due to

- (a) exposure to meteorological or environmental conditions

- (b) inadequate ventilation
- (c) excessive air movement
- (d) excessive humidity
- (e) overcrowding
- (f) or any combination of the above.

11. Section 150 (1) (j) Conveyances and Containers

The wording used in this section is difficult to understand.

Proposed revision

- (j) in the case where a conveyance is used for the confinement of animals for feeding, water and rest, the conveyance is constructed or maintained in a manner that does not permit the animals to be fed, watered and rested in the conveyance in accordance with section 159.2.

12. Section 159.4 (1) Records

It would be helpful to include the expected journey duration. Where the intended journey would be expected to be longer than the maximum intervals for feed, water and rest listed in section 159 (2), the planned arrangements for provision of feed, water and rest should be documented.

13. Comments on terminology used in the document

CVMA offers the following comments on terminology used in the Background section of the Regulatory Impact Analysis statement.

- a) The use of the term “suffering”

The CVMA believes that animal “suffering” (excluding any qualifiers) should be defined, and suggests it read:

“Suffering describes a condition where an animal perceives pain or some other negative affect that is prolonged. Suffering can be associated with both physical and emotional disorders.”

“What is animal suffering?” DM Weary. 2014. Dilemmas in animal welfare (ed. MC Appleby, DM Weary and P Sandøe), 188-202 http://ifs-awp.sites.olt.ubc.ca/files/2013/06/Weary_suffering.pdf

Hawkins, P. (2003). *Assessing pain, suffering and distress in laboratory animals: An RSPCA survey of current practice in the UK*. *Animal Welfare*, 12(4), 517-522.) National Research Council (US) Committee on Recognition and Alleviation of Pain in Laboratory Animals. *Recognition and Alleviation of Pain in Laboratory Animals*. Washington (DC): National Academies Press (US) (2009). 3, Recognition and Assessment of Pain. 47-69. <http://www.ncbi.nlm.nih.gov/books/NBK32656/>

The Science of Animal Suffering. Marian Stamp Dawkins, Ethology 2008

2. The 4th paragraph reads “Transportation is an unfamiliar event for animals that can cause significant anxiety. (see footnote 4) Poor welfare leads to increased physiological and psychological stress, which in turn can lead to increased susceptibility to disease among animals and increased shedding of pathogens due to increased intestinal motility. This poses a risk to human and animal health. (see footnote 5)” This wording is problematic in that although the term “anxiety” is used by some in relation to animals, (Reference: e.g. Steimer T. The biology of fear- and anxiety-related behaviors. Dialogues in Clinical Neuroscience. 2002;4(3):231-249) it is not a term often used by those studying animal welfare, where the term “fear” is preferred. The term “anxiety” is not used in the reference cited (Footnote 4). The difference between anxiety and fear is often considered to be that fear is the response to a perceived threat whereas anxiety is the response to a future threat or an undefined threat. Although anxiety can readily be used when considering human emotions, the ability of animals to foresee the future is less certain. They can of course base their fear responses of learnt behavior.

3. Elsewhere in the Background, the wording “Poor welfare leads to increased physiological and psychological stress...” is not ideal. Many consider that there is a psychological component to all stress (i.e. stress involving the hypothalamic–pituitary–adrenal axis). The term welfare is used inappropriately. Although the term is used in many different ways it essentially relates to the state of an animal and in particular its emotional state. Psychological stress is a component of welfare, not a consequence.